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THE

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A MONTHLY

JOURNAL FOR THE FARM AND THE GARDEN,

DEVOTED TO

AGRICULTURAL AND RURAL IMPROVEMENT,

AND

DESIGNED TO IMPROVE THE SOIL AND THE MIND.

ILLUSTRATED WITH ENGRAVINGS OF COUNTRY HOUSES AND FARM BUILDINGS
DOMESTIC ANIMALS, FARM IMPLEMENTS, &c.

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Editorial Notes in England.

ALDERMAN MECHI'S FARMING.

Fifteen or twenty years ago, a successful London tradesman, or *merchant*, as in such a business he would have been called by us,—"having some spare capital," resolved, with that taste for agricultural pursuits which forms a distinguishing feature in the English character, to invest his money in land. He purchased 260 acres. It was not the best of land. It was not in the best condition. "Almost surrounded by barren heath," the owner found the general opinion around him in Essex, to be that his purchase "could never be improved, even to become of tolerable goodness." He has since told the story of his expenditures, from different parts of which I am quoting these expressions. The principal adaptation of his soil was to retain the water that fell upon it from heaven and rose beneath it in hidden springs; and this retention was so admirably accomplished that the strong yellow loam subsoil which constituted a large part of it, was constantly in a state varying "between putty and bird lime, according to the season."

Under such circumstances, Mr. MECHI, for it will be already understood who I am talking about, did that most difficult of all things for a man to do—judging by the action of a great many, both here and in America, who have *too much land to cultivate it well.* He sold one-half, and determined that, be the obstacles what they might, he would improve the remainder.

Since 1843, when these steps were decided upon and improvements commenced, he has made some little addition to the farm, so that it now contains 170 instead of 130 acres. I visited Tiptree Hall the last day of June, and saw so much more that seemed to me of real, practical value, than I had been led to anticipate, that I hope what I can say here will not entirely fail to convey some of the lessons which Mr. MECHI has been endeavoring to teach. At the same time let me disclaim the anticipation of presenting anything like a perfect detail of his operations—a task which, so far as I know, remains to be performed. For the "Sayings and Doings" of the Alderman, consist of his scattered writings from time to time, unavoidably containing more or less repetition; representing, too, in some degree his changes of views with additional experience, but lacking in the connectedness that would render these changes features of still greater value in the progress of a perfectly relevant and straight-forward tale.

"I may be asked," says Mr. MECHI, "'What can you, as a Londoner, know about farming?' I will answer, 'I always loved the beauties of nature, the pure air of heaven, the sports of the field, and the hospitality of our honest yeomen. I have seen one farmer making a fortune, and his next neighbor losing one. I have seen one field all corn, and another nearly all weeds.'

"I asked, 'How is this?'—inquired into the causes—noted the results—obtained from all the best farmers, and all the best agricultural books within my reach, every information bearing on agricultural pursuits, and practiced in my own little garden, on a small scale, a variety of experiments."

Carrying forward upon his new property these experiments—agitating continually the necessity of certain improvements—if not in his own way, by some other means—of which he thought English farming pecuniarily capable,—his sentiments have progressed through different stages of ridicule and hostility until it is now commonly granted that while very few may wish to proceed upon his system exactly, he has yet done a good work in stirring up the many to direct measures of advancement. He has certainly been most liberal in the expenditure of his money in such a way as to test how far others may venture safely; and he has presented an example which in notoriety as well as from its intrinsic merits, must have been exceedingly effective. Moreover, as it was remarked to me in conversation by a large farmer in one of the midland counties, his efforts have opened the door to him of associations which in England money does not buy. Mr. MECHI, the widely-advertised vender of razors and razor-strops—Mr. MECHI, the wealthy Alderman, might have gone down to the grave with other dealers in fancy wares and consumers of turtle soup, but Mr. MECHI, the farmer of Tiptree Hall, is invited to Sir ROBERT PEEL'S, with lords "of high degree," and comes to be looked upon, as he mournfully says himself, in bewailing the responsibilities and "miseries" of the position—in the light of "a public improver."*

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* After speaking of the thousand questions with which eager inquirers prey upon his time, and of the resort to him by inventors without number for the means of introducing their schemes, he adds as a set-off, in the "consciousness of having been of some service" to his country, the "pleasing recollection that the two American Reapers were first tried" on his farm, in 1851. "Then they were wondered at; now Messrs. Burgess & Key alone are preparing to make fifteen hundred for use in 1859."

About Feeding Cattle.

"The quantity of meat made on a farm per acre, determines the quantity of corn grown."

"Mr. LAWES has shown beyond a doubt that there is no way of obtaining manure so cheaply as by feeding animals."

It chanced that Mr. M. was not himself at home, but I found the steward or bailiff, Mr. DRANE, an intelligent and communicative man. The first turn we took, very appropriately brought us into the feeding stables. Appropriately—because the feeding of animals is entitled to a front rank among the improvements we must more extensively practice, and because while many of the most peculiar, and to some obnoxious features in Mr. M.'s system here meet the visitor at once, he may also learn in what he sees, the general importance of careful management, the economical use of feeding materials, the benefit of comfortable quarters, and probably the strongest arguments that can be advanced, in favor of stall feeding in summer as well as winter.

The building which we now enter is of sufficient width for one row of stalls or boxes, and an alley in front of them from which to feed. The size of the boxes is nine feet nine inches inside breadth, and eight feet length, exclusive of the manger—each designed for two bullocks.—The manger is a simple box or trough, and receives all the food the cattle eat. So far there is nothing extraordinary in what we see, but the floor is certainly a surprise! It is composed of *slats* of good sound deal or other timber, three inches by two in size and two or two and a half inches apart. The animal has no bedding of any kind.—"There is nothing pleasing to the grazier's eye," as Mr. M. remarks, in such an arrangement. Indeed, like others, he had at first many prejudices against it. Both men and animals like a soft place to sleep on. When bullocks are first put into these boxes, they seem "afraid to move," and for twenty-four hours, nine out of ten "resolutely maintained their standing." Just a forkful of straw, however, spread about under them, seemed to overcome this "sense of insecurity," and they only required one resort to this expedient. Physicians tell us, reasons our host—that a hard bed is undoubtedly the most healthy. In this case the edges of the boards, at first new and sharp, in two or three weeks become smooth, and the animals find easy positions. This floor is, I think, perfectly horizontal and the slats placed, not across the box, but longitudinally as the animal stands. They are also used, however, and with results represented as similarly satisfactory, both for pigs and sheep. Mr. Huxtable is the author of the boarded floor system, but Mr. Mechi has modified the details, and, after trial and measurements of the hoofs of various animals, has concluded upon the following as the best size of slats:

For bullocks, 3 inches thick,	4 inches wide,	1¾ inches apart.	
For sheep and pigs, 1½ do.	3	do	1¼ do
For lambs & small pigs, 1½	3	do	1 do
For calves, 2 do.	3	do	1½ do

The result of putting two bullocks together is not found to retard their progress in flesh-making—the better ox, as elsewhere, will be the master, but not to the injury or discomfort of his associate. They are all groomed daily by a boy—a process which appears to contribute much to their enjoyment. The floor, although not swept, is always clean; a little gypsum (plaster) is sprinkled over it every morning—about a peck to ten bullocks.

Economy in Saving the Litter.

The great advantage claimed by this system, aside from the assertion that it actually contributes to better the health of the animal and the quality of its beef—is the saving both of the bedding and of the labor that accompanies its distribution, removal, and the subsequent management of the manure, of which last we will speak by and by. All the straw is wanted for feed. As Mr. HORSFALL argued when I visited his place, the straw when used for litter is only of value as a contribution to the manure heap; when it is fed to the animal, those parts which in the dung-pit would ferment and escape, are precisely the ones which the animal converts into its own tissue, while the mineral elements which it does not make use of, remain for fertilizing purposes as before. Now the value of straw simply as manure, is computed by Mr. Mechi to be not above $2.33 per ton, (9s. 4d.) while for feed it is worth to him $5, or more than double as much. This difference is one which he does not think he can afford to lose, for he calculates upon a production of two tons of straw per acre, and a loss of, say $5 per acre, on fifty acres of wheat, will go a good way toward the difference between farming at a profit and farming at a loss.

PORTRAIT OF MR. MECHI.

The pains taken to illustrate and verify these facts, show to what economical minuteness, so to speak, the English farmer has been compelled to go in order to sustain the gainfulness of his calling under those numerous expenses with which he is burdened by government, church and landlord, and notwithstanding which he has accomplished the grand triumph of so far competing successfully with all the rest of the world—the cheap labor of the continent and the cheap lands of America. With us, where we have difficulty to bring our farmers into the way of converting their straw into manure, to go beyond this use into a calculation of its further value as food, seems almost a waste of words. But such will not always remain the case where it is so at present, and the subject may not be universally disregarded even now. From Voelker's analyses, alluded to by Mr. M., he derives the statement that the soluble fattening substances contained in each 100 lbs. of straw are equal to 18¼ lbs. of oil. How, then, he asks, can it have been so long disregarded? "Simply because the straw in an unprepared condition, is not in an available condition for food."

Before proceeding to the method of preparation advocated, there is a difficulty to be disposed of, which may already have arisen in the reader's mind. In casting our eyes about the building we were looking at, we merely noticed the floor, but did not go below it; and the question that at once occurs, is this—how is the manurial matter we obtain, to be managed and transported without some such material as straw to act as an absorbent, and give it greater cohesion? The answer is two-fold—the first, not strenuously insisted upon by Mr. M., although it has been one of the most striking features in his management, while the second he also employs, I believe, to a large extent.

Beneath the slats on which we have been standing, there runs along a tank about three feet in depth, of brick, laid in cement and water-tight, its two ends having a slight descent towards the middle, whence there passes a pipe or drain into a large outside tank of no less than 80,000 gallons capacity. Mr. Mechi's way is to admit a flow of water into the tank under the animals until its contents are diluted and liquified so as to pass wholly into the exterior cistern. The hose employed for this purpose, in hot weather may be used also to wash the whole interior of the building and keep everything, even to the animals themselves, clean and cool. The existence of such a mass beneath them, does not prove in experience to emit the putrefying stench that might be anticipated; when undisturbed, indeed, it forms so dense a mass that sufficient air cannot penetrate it to produce the fermentation that would take place with the presence of straw to lighten up the heap and permit the admission and circulation of the atmosphere; and when the water flows in, the whole is washed away at the least possible disagreeableness and expense.

The Use and Manufacture of Burned Clay.

The other method of managing manure in this condition, is found in the use of *burned clay*. Upon the heavy soils of Steuben, Major **Dickinson** has been an advocate of burning sods to use the ashes as a fertilizer, but it is quite a common thing in many parts of England now to burn the simple soil itself—of course whatever vegetable matter it may contain being considered a welcome addition, but the great point lying in the conversion into an available supply of mineral matters, of the hard subsoil and other clods—in themselves sometimes actually poisonous to the plant, although when reduced to brickdust at once rendered "attractive, absorbent, filtrative, instead of being, as formerly, sullenly unalterable and repulsive." Good farmers use it to advantage, drilled with their turnips; spread broadcast over a field, it is found lasting in its effects—apparently sinking "gradually down into the obstinate subsoil," and imparting to it something of its own permeability. The inorganic elements contributed to the soil by the animal life of every sort under or upon it, for which it has long been "the feeding-ground, the dung-heap and the grave;" the stones that lock up in their hard sides so many of the same materials which give the straw its glaze and stiffness, and the grain its phosphates; the germs of new weeds and the decaying remains of old vegetation, by this trial of fire are all converted at comparatively little cost or trouble into either what is actually available as plant food, or what exerts the best effect upon the mechanical condition of the ground.

Now, the burned clay may be employed to the best advantage with the manure under the boarded floors, and is cheaply obtained in large quantities—the estimated cost per 100 loads of 27 cubic feet each, being,

For labor and burning,	$10.84
For fire wood,	2.08
For plowing and horse labor,	2.08
Total,	$16.00

That is 16 cents a load. It is strongly recommended for use under sheep, only one-fourteenth part of their excrement being in solid form, while one barrowful of clay daily to twenty sheep will preserve the remainder perfectly. "Sheep do not get sore feet upon it." The only purpose, remarks Mr. M., with which we turn over and manipulate our ordinary manure heaps, is to secure the proper decomposition of the straw they contain; manure mixed with burned clay is carried at once from the farmstead to the field and applied where wanted. L. H. T.

◆◆◆

DRAINING SWAMPS—MUCK FOR MANURE.

At the recent Connecticut State Fair, Agricultural Discussions were held each evening; and the subject on Wednesday was the drainage of swamps and using muck for manure. The remarks, some report of which we find in the *N. Y. Tribune*, give additional confirmation to what we have already said on the subject, especially upon the different characters of soil which they present, and their value for the production of different crops. We therefore condense the most important portions for our readers.

Mr. **Sumner** of Woodstock, had drained a swamp of eight acres, in which the muck was fifteen feet deep. The main drains are open, the rest covered. The muck of the ditches he estimated as worth more than the cost of digging, when composted and carried on the upland. At first the swamp was too soft to plow, and he raised a good crop of potatoes by wheeling on sand to cover the seed, a shovel full to a hill. The land is now firm enough to plow, and grows grass, and any vegetables desired.

Mr. **Hart** of Cornwall, had drained a swamp with open ditches, taking off the water three feet below the surface, and seeded it to grass, and one year got fourteen loads of hay from four acres. Still, he said, that was not upland hay, nor in any way equal to it in value, and rich as the soil was, it would not produce a fair crop without manure. Hence had not of late given it much attention, and believed the muck worth more to cart upon the upland than to cultivate where it lies. He had found some benefit from hauling muck upon loamy soil, but it was more valuable composted, and he used the muck in all his stables, and also to absorb all the soap-suds and wash of the house, and thus made valuable manure.

Mr. **Hoyt** of New-Canaan, had not found cultivating swamp muck, several feet deep, profitable; but found it valuable to haul to the stables and out-houses for an absorbent, and to increase the amount of manure for upland.

Mr. **Bill** of Norwich, thought the difference in the effects produced arose from the variation of the character of the soil. His drained swamp was the best land he had. He also made great use of muck as a manure, making, with the help of six or seven head of cattle and a few hogs, three or four hundred loads of manure each year.—Guano and muck, ten pounds of the former to a load of the latter, makes a very valuable compost. He had brought very poor land into a state of great productiveness by the aid of swamp muck.

We copy the remarks of Prof. S. W. **Johnson** in full, as reported. He said:

"We have all grades of what is called muck, ranging from that containing only two per cent of any substance but vegetable matter, to those containing fifty per cent of mineral water [should not this be *matter?*] Of course the use of these mucks will produce different results. Upon pure muck we cannot produce any grass or grain that will ripen its seed, more than one or two years. Such muck is valuable to mix with soils, but is nearly worthless alone. Some persons have sent me samples of muck which they say are equal to good manure, without composting. Some muck is said to be deleterious, and in that I find salts of iron. To determine the value of muck, we must know its ingredients. In some cases nitrogen accumulates in muck, and when that is brought out and put in a situation where plants can assimilate it, it will always add to the value of their products. The excretion of any animal, mixed with muck, is rendered more valuable, from the fact that the muck absorbs and saves the ammonia.—Plants over-stimulated with ammonia, produce much foliage and few seeds. * * Some of the most valuable deposits of muck appear to be composed almost entirely of decayed leaves and vegetable substances. Such muck may be applied at once, with good effect, to almost any crop, without any preparation, or mixing with any other substance. Of the great value of muck deposites to the owners of poor upland, there can be no dispute. The only thing is to know how to treat it so as to make it most valuable."

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Cheese Making.—Mrs. T. L. Hart, of West Cornwall, Ct., received the four first prizes for Cheese, at the late Conn. State Fair—to wit, 1, for old cheese—2, for new cheese—3, for old English Dairy, and 4, for new English Dairy—notwithstanding there was an extensive competition. The Homestead says Mrs. H. was Hartford born and bred, and never saw a cheese made until after she was married.

WINTER MANAGEMENT OF MANURE.

Looking over this morning, "*The Cultivator*" of some twenty years ago, when conducted by Judge BUEL, we noticed an article on the above subject, which might be read with profit even at this late day—but do not propose to reproduce it here. We will merely give his statement of "the objects to be obtained in the winter management of manure," and then add some thoughts drawn from our own experience. The objects are—

"1. To prevent waste by leaching and drainage;
2. To prevent its becoming fire-fanged; and
3. To prevent more than moderate or incipient fermentation."

—Called away at this, by some necessary farm-work, we did not again take up the pen until evening. Meanwhile our thoughts were busy with the subject, and some conversation with a farming friend led us to give them the form of a dialogue.

B. "The question comes up—What is the best way of managing manure in winter?"

A. "Managing manure? and managing it *in winter.* It is as much as I can do to manage my foddering—the manure I *manage* when I draw it out in the spring. What next will you book-farmers meddle with?"

B. "Let's talk a little about that. When you drew out your manure last spring, where did you find the best and richest, or was it alike over the whole yard?"

A. "Don't know—didn't observe particularly. Got it all out though, and plowed it under for corn and potatoes?"

B. "Right enough, perhaps, so far, but let me tell you what you might have observed *as to quality*—what we have noticed when drawing out manure."

A. "Some of your personal experience in the barnyard?"

B. "Yes. And first, it is an axiom in hydrostatics that 'water runs down hill.' It certainly does so in the barnyard. And, however level the surface may be, there is generally a 'lower place,' and in spring time that place is full to running over, of a dark colored fluid, which drains away, it is to be hoped, into the farmer's adjacent fields, and not into some stream or public highway."

A. "Yes, I hope so. I would not be as wasteful as that."

B. "And yet you may, by not managing your manure properly, waste one-half its value. This drained manure of which we were speaking has suffered loss. Testing it by drying, it is (even if originally of the most valuable character,) light, chaffy stuff, compared with that which has not been exposed to this leaching process, showing that it has lost largely in value."

A. "Not much loss to me, perhaps, for the drainage enriches my orchard."

B. "If there is much of a hollow in the barnyard, and the subsoil is clay or hard-pan, water can pass off only by evaporation. That hollow, (and some make them on purpose,) is frozen over in very cold weather; in mild winters, and for a long time in spring it is 'a slough of despond,' almost impassible to man or beast. It so remains for a long time in summer, unless cleared out and drawn to the field—a large part draining from the cart on the way there. Of this we observe:

1. The liquid part is of some value, though too diluted, but a large portion is lost in application.

2. The solids (tested as before, by drying) are nothing but litter in an almost undecomposed state—for decomposition goes on very slowly in cold water."

A. "Very true, and that is one reason why I dislike these 'dishing' barnyards."

B. "In another part of the yard the manure pitched up is nearly all straw, more or less rotted, and of value so far as it has not been leached and the original material will allow. Mere rotten straw, however, is worth little; a wagon load thoroughly rotten could be carried on a wheelbarrow. Another spot seems mostly composed of animal droppings thrown from the cow and calf stables, or around the feeding places in the yard. This is the best of the manure, but it wastes by leaching and decomposition before the farmer is ready to apply it to the soil."

A. "You forget the horse manure back of the barn."

B. "No, that is managed the worst of all. The outer part is well bleached straw and dung—the center is an almost inert mass of fire-fanged straw and manure. The heat which has been evolved in its decomposition has been sufficient to drive off its most valuable constituents, and *the property of fermenting readily*, which, according to Prof. Johnston, renders it so valuable as a means *of bringing other vegetable substances into a state of fermentation*, is nearly or entirely lost."

A. "How then shall I manage my manure? If you can show me any system that promises to pay well, perhaps I'll go into it."

B. "You have good sheds around your barnyard to shelter your stock."

A. "Yes, I do not like the trouble of stables, but I want to keep my cattle and sheep comfortable. So I stable a part—my milch cows and young calves—and allow the rest the run of the sheds and yards."

B. "Then you can put 'the wheelbarrow system' into practice. It does not require a great deal of labor and answers a very good purpose under your particular circumstances."

A. "Well, give us the *system* of the one-wheeled locomotive."

B. "First, have good racks under your sheds, so that your cattle will feed there. Second, have them roomy and well littered, so that they will rest and sleep there.—This will, of itself, bring a large share of your yard manure under shelter. But its decomposition will be too slow to allow it to attain its greatest value for spring crops.

Now bring on your wheelbarrow. Remove to your shed and the dryer portions of the yard, every day, the manure from the horse stables. This dung is richer in nitrogen, the most valuable constituent of manure, than that of any other farm stock, but as usually treated, a large share of its value is lost. To retard its too active decomposition, mix it with the colder, less active dung of cattle from their stables, &c., and a large quantity of litter, and the value of the whole is greatly increased—the horse manure carries on the decomposition of the whole mass, (if kept damp enough,) "about right" to prevent loss, and to get the full value of all the materials employed. If not sufficiently rotten in spring, it may very speedily be decomposed by giving it *air and moisture*—by heaping it in light heaps out of doors for a few weeks. Or if plowed under immediately in a long state, it is much more valuable than if not *managed* as above described.

"*Mix* and *shelter* your manure in this way, Mr. A., and you will find it a different article in its effects from that you have heretofore applied. At least I have done so.—It is important, I will repeat, that this mixed manure be kept where it will be trodden hard by the stock. Treated in the same way, and placed in a barn cellar, it will firefang or burn—here it is too solid for that, but not for a slow decomposition. The constant addition of litter required, will use up the refuse fodder of the farm, and more too, if one gets dry leaves, sawdust and the like, to add to the stock of fertilizing material. And the use of the wheelbarrow, or mixing the material where it will be sheltered and receive and absorb a large share of the liquid manure of the stock, will give about the best condition and quality of barnyard manure."

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LARGE CROPS vs. LARGE FARMS.

It has been tersely remarked, "If our farmers, instead of laboring to double their acres, would endeavor to double their crops, they would find it a vast saving of time and toil, and an increase of profits."

Is this true? Is the secret of successful farming what it has been declared to be, "Much labor on little land?" Up to a certain point we believe it to be so. A few farmers are successful because they possess a soil naturally rich in every element of fertility, and suited in character and situation to the growth of large and profitable crops, but these farms form but a small portion of the whole surface of the country under cultivation. Most soils need some improvement and amendment—deepening, draining, and manuring—in order to their highest productiveness; and all need careful cultivation, at least to keep out noxious weeds, the "thorns and thistles" with which the earth was "cursed for our sake."

With too many farmers, the acres in possession do not come nearly up to the productiveness which might be attained. "Doubling the crop" would be thought a very simple undertaking by the progressive farmer—he would merely add sufficient labor in the preparation of the soil to give the product to which he would devote it, *a fair chance*, —depth of soil, appropriate food, freedom from weeds, etc.—and the yield would be doubled at once. That farmer will be most successful who, by a wise expenditure of labor and capital, gives to the lands he cultivates a like character with those most productive, not forgetting, also, by clean culture, to *concentrate* the whole energy of the soil on the crop. Artificial means must be employed to give depth and fineness to hard and shallow soils, and a course of manuring and culture adapted to add the elements of fertility to sterile and impoverished ones. Stagnant water, that enemy to all vegetation of a profitable character, must be drained off, and retentive soils thus ameliorated. Light sands ask for an addition of a calcareous or aluminous character, to give them better consistency for cultivation. The hill-sides and knolls have long contributed from their soluble and floating elements of vegetable matter, to fill the adjacent marshes; let these return their rich deposits of muck, and a partial exchange of soils would be no injury.

The passion for more land is one which works incalculable injury to American agriculture. It crowds out of farming many who would otherwise engage in it—many who, were small farms more readily attainable, would do good service in the culture of the soil, and in the elevation of the character of our farming population. If the great mass of farmers would engage in the laudable enterprise of "doubling their crops," they would soon find use at home for all their outside investments—and excuse for selling off that portion of their land which they had not ample means to cultivate,—would soon find, too, that they were making more money, and doing a more pleasant and satisfactory business than under their former system. We are glad to see the idea gaining ground that farming cannot be carried on without capital, enterprise, intelligence —and that it opens a fair field for the exercise of the noblest endowments of the human mind.

Let us then be less covetous of surface—of large farms and broad plantations—and more anxious for productiveness—asking for better crops, finer animals, more serviceable implements, rather than "one field more." Why, when our title deeds cover all beneath us, should we not be anxious to own and use the subsoil, instead of seeking ever to enlarge our outside boundaries. Why cry "more land," when our sterile acres are a shame to our skill in farming what we already possess, they give such meagre crops. Let us farm thoroughly a few acres, and we shall thus best prepare ourselves to farm profitably upon a larger scale.

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THE CROPS OF OHIO IN 1858.

A table of the grain and meadow crops of Ohio in 1858, contained in the last *O. Cultivator*, shows that

1,695,412	acres	produced	17,655,483	bush.	Wheat.
1,834,138	"	"	50,863,582	"	Corn.
90,191	"	"	874,556	"	Rye.
125,745	"	"	2,103,199	"	Barley.
71,283	"	"	791,031	"	Buckwheat.
1,357,874	"	"	1,806,465	tons of hay.	

This is an average of not quite *ten bushels and a half* of wheat to the acre, and twenty-seven and three-quarters of corn; a little more than nine and a half of rye, sixteen and a half of barley, and eleven of buckwheat; and, finally, and best of all, full a ton and a third of grass to each acre of meadow land. If we had the time at command, it would be an interesting although rather laborious task, to give some further details as to the average in different counties. A hasty glance at the figures seems to show that the largest average of wheat is 19 bush. per acre in Hancock Co. Erie Co. comes next with only a little more than 16, and the only others which average more than 15, (and all less than 16) are Henry, Huron, Richland, Sandusky, Scioto, Seneca and Wyandot. The average of many counties is considerably below 10 bushels. Stark produces the greatest quantity—being the only county that exceeds a half million bushels—its average is about 11¼ per acre. Next in amount follow Butler, Wayne, Seneca and Richland, each producing between four and five hundred thousand bushels. There are two counties, Trumbull and Ashtabula, containing each over 50,000 acres of meadow land; Portage contains a little over 40,000 acres, and the next largest are the following in the order named, all having more than 30,000 acres: Geauga, Cuyahoga, Stark, Lorain, Wayne and Medina.

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Growing Clover for Hay, Seed, and Pasture.—The advantages of this crop are well stated in the communication of "F., Orleans Co., N. Y.," and we can add our testimony to its value on all upland soils. As to hay the past season, although the dry weather of May and June injured our clover, we get more hay from six acres of this grass than from four times the number of acres of old meadow. Farmers who had no clover or newly seeded timothy meadows the past season, have little hay in their barns the present winter. We got a good second growth, but think it is not as fully seeded as some years—many heads containing little or none. The clover seed crop usually pays as well on the average as grain crops, and requires much less expense of cultivation. It probably exhausts the soil as much as other crops of equal value, but it also enriches it by increasing the return of manure from the barn-yard, and also by the decay of the numerous roots in the soil. B. *Niagara Co., N. Y.*

HINTS ON DEEP PLOWING.

That deep plowing is often very beneficial to many soils does not admit of a question among intelligent farmers.—The *when* and *where* is the only point of dispute. We find in an English agricultural paper this subject discussed at some length, and think the points brought out will interest and instruct American readers. We condense them in the two following paragraphs, and add some facts from a practical New-England farmer and writer.

Deep plowing is most effectual in the autumn, exposing soil to the influence of frost, rain and air, through the winter, which act upon the mineral ingredients of the soil, rendering them available for succeeding crops; also, pulverizing the soil and thus facilitating the passage of the roots into the subsoil. As regards the period of the rotation, it should precede root crops (or in this country, Indian corn) or may be the first plowing for fallowing preparatory to the wheat crop.

Deep plowing is most beneficial to stiff clays, and, as a rule, we may plow deep when the subsoil is of the same character as the surface soil, if both are tenacious, or when the subsoil is composed of good clay, only requiring atmospheric influence to sweeten it. Deep cultivation should be avoided on nearly all very light soils, and in plowing for crops after large applications of manure, thus burying it too deeply, or in turning under clover or other green crops. Deep plowing in autumn, on most clays, is equal to a half dressing of manure. Clay from which the air is excluded, exhibits a dark blueish color. After draining, it is not advisable to bring up more than two inches of clay subsoil at a time; otherwise more is brought up than the frost, &c., can fit for growing good crops.

Hon. F. Holbrook, writing of the advantages of deep plowing on long cultivated soils, to the N. E. Farmer, says:

"Where the land is of a close texture, with a strong compact subsoil, it is not unusual to find a better farm underneath, than that which has been worked so long and so shallow on top. By breaking through this artificial hardpan or crust, and bringing up a portion of the under soil to the light of day and the influence of manure, the crops are by that operation considerably increased, even though no more than the customary quantity of manure per acre is applied. And if high manuring is practiced in connection with the deeper cultivation, the crops will be very much increased over what could be realized from the old shallow plowing and artificial hardpan near the surface, accompanied by as high manuring. Then there is the difference, too, in the case of tilling the crops raised on deep, mellow land, as compared with those on hard, shallow plowed land.

If deep sod plowing is to be practiced, it is especially desirable to do it in the autumn, that the atmospheric influences may ameliorate and modify the upturned subsoil, preparatory to future cultivation. Plow the greensward in November, say eight to nine or ten inches deep, according to the quality of the subsoil. In the spring spread a good coat of manure, which, if fine compost, can be sufficiently mingled with the soil and covered by the harrow and cultivator; or if coarse, can, by lightly cross-plowing, be turned under three to four or five inches deep, according to the depth of plowing in the fall. If the plowing was, say nine inches deep, there will be no difficulty in guaging a light plow, with a sharp share and wheel on the beam, so as to cross-plow in the spring and cover the manure about four inches deep, without disturbing the sod underneath. Green manure, well covered that depth, will decompose readily, and be more active and effective on the succeeding corn or other hoed crop than if turned down under the sod."

An instance is given where sod land was plowed in the spring for corn, turning under the manure some six inches deep. "Nearly half the crop was destroyed by grub worms; and the soil, being a close compact loam, the manure under the sod was too inactive, so that the corn which did survive was backward in maturing." The next year, the owner wishing to plant a piece of green-sward adjoining, also infested by grubs, consulted Mr. H., who advised as above. It was plowed in November, and in the spring harrowed lightly and then manured and cross-plowed, turning under the manure from four to five inches deep. The corn was planted in the usual manner, and produced a good crop. No traces of worms have been seen, and the soil has been very mellow, and free from grass and weeds, and easier to till every way than the piece of the previous year. The subsoil was a close, light-colored, clayey loam, but by spring it had changed to several shades darker color than when first exposed to the air, and no doubt the good effects of this deep plowing will last for many years.

An instance of the renovation of old worn out plain land by deep plowing accompanied by high manuring, is given by the same writer:

"The land had, for many years, been under the wasting effects of shallow plowing and severe cropping with rye, until at length it was quite exhausted, and abandoned to pasturage, yielding a scanty herbage in the early part of the season, but becoming dry and sere by mid-summer, and remaining so through the remainder of the year. My friend found that the surface soil was of little or no account any way, but thought there might be some hopes of making productive land of the subsoil. He accordingly commenced upon a piece of the tract, of about five acres, by at once putting in his universal sod and subsoil plow ten inches deep, in the month of November, and turned up a subsoil of yellow loam, fine-grained and free from stone, and that had never before seen the day. In the spring following the plowed land was manured broadcast, at the rate of about twelve cords per acre, and cross-plowed with a sharp steel plow, turning the manure under four or five inches deep. The field was then harrowed, furrowed out in rows each way, a tablespoonful of superphosphate put in each hill, and the piece planted with corn. It yielded about seventy bushels of shelled corn per acre, and the next year a good crop of oats, and is now well set in grass, for a mowing field. Other portions of the condemned old plain are now undergoing a similar process of deep plowing and high culture, with good results; and this desert will doubtless soon blossom as the rose."

As we have remarked before, there can be no question that a deep and fertile soil will produce much the largest and best crops. There must be room for the roots to go down beyond the reach of a common drouth, and to find appropriate food for their use, and this is most largely present in a deep and mellow soil. Deep plowing and high manuring will, on most soils, produce the profitable results, and as the present is a very favorable time for the first, we hope these broken hints and gleanings will prove of service to our readers.

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POTATOES—NEW VARIETIES.

Editors Co. Gent. and Cult.—For several years past I have been interested in trying new varieties of Potatoes, and have found none that have pleased me so well as "Prince Albert" and "Davis' Seedling," both on account of productiveness and excellence, as well as *freedom from rot.* I raised over two hundred bushels of "Prince Alberts" this year, the finest tubers I ever saw—their eating qualities unsurpassed; the yield being on a considerable part of the ground planted (with ordinary cultivation) at the rate of full four hundred bushels per acre.

I planted one peck of "Davis Seedlings"—putting from one to three eyes in a hill, on land highly manured, but rather wet, the yield being twenty-eight bushels of perfectly sound tubers—some hills nearly or quite filling a peck measure. I think most varieties would have rotted badly on this ground. The eating properties of this variety are also first rate.

The above named varieties are *white fleshed* and on account of their good qualities, great productiveness, and manifest freedom from rot, will eventually come into very general cultivation as market varieties. B. J. HARVEY.
Adrian, Mich., Nov. 21.

MORE ABOUT MR. MECHI'S MANURING.

The following extract from our Foreign Notes, explains Mr. Mechi's system of Liquid Manuring, to which allusion has been made in another column:—

The first operation, as has been already intimated, is to force a jet into the tank under the sparred or boarded floors. It thoroughly stirs up, dilutes and intermingles the mass there accumulated; and the whole runs off into the outside cistern—a structure 30 feet deep from the crown of the dome which rises some feet above the ground, and 30 feet in diameter at its widest part. The engine force-pumps take the manure from the tank, and propel it through underground iron pipes over the whole farm, in the same way that the water in a city is carried around through its streets. A pipe of four inches diameter carries it first a distance of several rods, where there is an air chamber to relieve and equalize the pressure; then three pipes branch off in different directions, of three-inch diameter, and distributing the liquid through hydrants, one hydrant being allotted for every ten or twelve acres.

They were employed in the irrigation of a field of rye grass, containing eight acres, the day of my visit, and I could have desired no better exemplification of the system. To the hydrant in the center of the field, is attached a hose long enough, with the force of the jet, to sprinkle over the whole area. A man, with the aid of a boy in moving the hose, &c., was giving all parts a most thorough wetting.—The droppings of the animals, instead of remaining to kill off the vegetation they chance to cover, are washed into the surrounding earth by a minute's application of the stream. Seeds of all sorts, by the way, which get into this liquid manure, will do no harm when they come out upon the land, for a short saturation in the tank has been shown to destroy their vitality. The vegetation around us seems already to have received a new impulse of life within the hour since it was showered, and yonder, where the hose is now in play, the herbage brightens up as it might after a summer shower.

In 1858 this field was in wheat; I did not ascertain the precise yield obtained upon it, but the bailiff on consulting his books for me, found that the average for the whole area under wheat upon the farm, was forty-six bushels per acre—rather a smaller production than a really good year will bring. In May, Italian rye grass had been sown upon the wheat. After harvest it would probably have received an irrigation, and in March this year eleven bullocks, five horses and fifty sheep, began to feast upon it—continuing to graze here for three weeks. Then an intermission of a fortnight was given for irrigation and growth; the stock again admitted for about the same period as before, thus terminating this second feeding about the middle of May. After a fortnight of further respite, the third was begun; it was nearly or quite concluded when I was there, and the fourth was being urged along. The third feeding, however, was a longer and closer one than either of the others, and full three weeks were then to be allowed—bringing the fourth at harvest time, when a growth of full two feet would be ready for consumption. The grazing could then be continued at intervals according to the season, the condition of the stubbles, &c.; occasionally, indeed, a fifth regular cropping has been taken, but the yield of the second year would not probably be benefitted by pressing the first too closely. The second year, indeed, the produce has sometimes been larger than the first, but Mr. Mechi's experience has not been favorable to more than two year's growth of this crop.

It is only by means of a most abundant supply of water, that so much solid matter may be carried out by means of this underground cartage. Of course the manure may be diluted in different degrees; it requires about fifteen tons of water, I think I was told, to make one ton of the manure run easily, but in hot summer weather, when the purpose is really one more of irrigation than of actual manuring, as well as to obviate any danger from the too great strength of the mixture, sometimes fifty hogsheads of water are admitted to one of manure. Not only does the water thus float out all the stable accumulations, but whenever these fall short and guano is wanted, it is also sent by the same road, and, still more strange, the carcasses of dead animals come likewise into this common receptacle, are macerated by degrees, and pumped at length over the fields—so that at one time the tank actually contained, says Mr. M., between 20 and 30 dead horses and cows.—During the winter, or upon fallow land, there is no danger from the too great strength of the liquid, while in a dry time, on the contrary, it is perhaps true that the weaker the solution, and consequently the greater its quantity, the better.

HARVESTING INDIAN CORN.

Although there has been considerable discussion upon the subject, I have noticed but one actual trial being made, and that has been published in nearly all of our agricultural papers, and the result was in favor of topping the corn. So long as a difference of opinion exists in regard to the best mode of harvesting corn, farmers should be willing to give their opinions, even if they have not made an actual trial. That one way is *the* best under all circumstances, we do not claim, although some *editors* as well as farmers, think there is but *one* way.

I was taught to cut the stalks, and practiced that mode several years, and it was the usual custom among farmers in those days. But I have adopted the mode of cutting up my corn by the roots for the last few years, and am satisfied it has several advantages over that of topping, or cutting only the portion of the stalks above the ears. In the first place the labor of cutting and binding stalks is about the same as cutting and binding the whole; consequently nearly one-half of the labor is saved by adopting the mode of cutting up by the roots. Again, the fodder is worth nearly double, an item worth saving, especially this season, where the hay crop is light, as it may save many tons of hay in many cases. Most farmers fail in stooking up corn, by making their stooks too small; accordingly their fodder is injured much more. There is no danger in putting fifteen to twenty-five bundles in a stook if put up right, that is by leaving a little space in the center for the air to circulate—besides it will stand much better.

Many farmers also practice sowing winter rye upon their corn ground, and by cutting it up it may be sown as soon as the corn is cut. I practice the following mode: I plow and sow strips of land of sufficient width for stooks, and at such distances as convenient, and stook it up as fast as cut. Then the ground may be plowed and sowed between the rows of stooks at any time. Consequently you get your rye sown a number of weeks sooner than by the other method—an important consideration. There is also another mode adopted by a class of farmers called *slovenly*. They let the whole remain in the field, and go round and pick off the ears. If not worth anything for fodder, it would pay to cut and cart into the yard for manure. Besides they would be out of the way for the next crop.

As our seasons are so variable, we are under the necessity of adopting a mode which we should not under more favorable circumstances. If a severe frost is apprehended, it ought to be cut to save it from that total drying out of the juices, which seems to take place if allowed to stand on the hills. J. B. B. *New Braintree, Mass.*

NEW GRAPES.—We are indebted to SAMUEL MILLER of Lebanon, Pa., for a fine collection of plants of thirteen of the newer varieties of American grapes, sent to us for trial in the climate of New-York.

Rural Architecture.

WORKING-MEN'S COTTAGES.

George D. Rand contributes to the Annual Register of Rural Affairs for 1860,[*] several original designs for Country Homes of different classes. We purpose to copy herewith a part of his remarks upon "Working Mens' Cottages," accompanied with two or three of the Designs—referring the reader for further information and for Designs of Farm Houses, &c., to the Register itself.

It has been with the purpose of bringing to the aid of those not likely to consult more expensive and elaborate works on rural architecture—or if they should consult them, should find everything on too costly a scale for their purposes—that we have introduced into these pages from year to year, such designs as, in our judgment, are calculated to improve the taste and furnish some available knowledge upon the subject of building a home in the country. We have some reason to believe that our previous efforts have been widely appreciated; and we hope this further contribution may be as favorably received and as extensively useful.

We have thought it of little use to publish designs of cottages containing, besides the pantry, closets, &c., less than three rooms. No good American housewife is for any long time content with less, and no industrious, intelligent working-man, need ask his wife to take up with less. Those who are willing to live in more straightened quarters, would never look into these or any other pages for a design for such a cottage, but would build something after the style of those they were familiar with, whether it were the log cabin or the Irish laborer's shanty of turf and boards. Our designs, therefore, in this number of the Register, will begin with a cottage, which, although small, has some claims to a pleasant style of living, and which can be made tasteful as well as comfortable. Such a dwelling will be found capacious enough to rear in much refinement an ordinary family, and if substantially built, even of wood, will last two or three generations.

That the smallest of these designs may be the better appreciated, we wish to refer the reader to some remarks made in a previous number of this work, in relation to building small cottages on large farms, for the occupation of the farm laborers and their families. Since the publication of those remarks, we know of several instances where they have been acted on, and have reason to rejoice with those more directly interested, that so good and every way beneficial results have followed the adoption of the plan. We ask the owners of those large farms who take into their own families the numerous laborers whom they are compelled to employ, to consider a moment if they are pursuing the most judicious course. We acknowledge it may involve less immediate outlay than any other plan, and may in some instances be a trifle less expensive from year to year. But we will suggest once more, whether the saving be not made at the expense of many home comforts, much refinement in the increasing family, and an untold amount of drudgery for the farmer's wives and daughters, that fearfully imperils their continued good health, and reduces them to a servant's knowledge of the world about them, and how to render home attractive, and all its influences pure and healthily stimulating. We are among those who believe that a farmer's home may be as full of grace and beauty, and as suggestive of high hopes as any other. We know of no good reason why they, more than others, should yield their lives and the lives of their families, to the discomforts of a primitive style of life and the hard wearing monotony of thoughtless toil. The easily attainable possibilities of a nobler life are so much greater than this—the way has been shown in so many living instances, and the reward reaped is so evident and satisfactory, that we are impatient that every dweller in the country should make the most of his opportunities, and labor not alone to put money in his pocket, but also to increase his knowledge, cultivate his appreciation of the beautiful in art and nature, and attune his perceptions to the fine harmonies of a well-ordered, refined life, which unites the whole family circle in constant efforts to promote the general intelligence and happiness.

Our plans and descriptions in this number occupy so much space, that we will not stop longer to discuss the general theme, but proceed to the plans at once. First we give three designs for Working-Mens' Cottages.

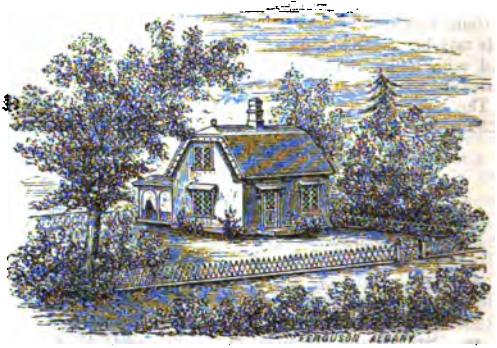

Fig. 1.

In accordance with the preceding remarks, the first design we shall present, is one as compact and as moderate in size as will allow of the number of rooms specified. In the perspective view, (fig. 1,) we have chosen to represent a style of construction once very common in the older States and across the ocean, and even now regarded by the best architects as peculiarly adapted to small picturesque cottages. The side walls are only one story in height, which renders the style more suitable than story and a-half houses, when either stone, brick, or concrete is to be used. The tie-beams go directly across from plate to plate, thus preventing all spreading from the pressure of the roof, which is a fruitful source of trouble in one-and-a-half storied houses. The steep pitch of the roof, to a height sufficient to allow of comfortable rooms in the attic, makes the chambers nearly as large and pleasant as in a house of two full stories, while the cost is considerably less, and much is also gained, in our opinion, in the picturesque appearance of the exterior, which harmonizes so well with all our ideas of what a small unpretending cottage should be.

The main portion of the cottage is only 16 by 24 feet. A lean-to, 9½ feet in width, is added on the back side. It should be made of good height, coming just under the cornice of the main part, the roof rather flat, and hipped at the ends. One end is left unenclosed for a veranda, as may be seen by reference to the design.

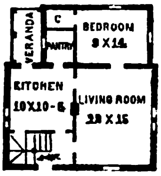

Fig. 2.—Principal Floor.

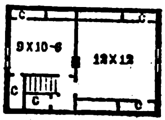

Fig. 3.—Chamber.

The plan (figs. 2 and 3) needs little explanation. It has one or two points of superiority over most plans usually adopted in so small dwellings, which may be mentioned. It will be noticed that the front door opens into a pretty hall or entry, from which the chambers are reached, and which also gives access to the living-room and the kitchen. This arrangement gives an air of elegance rarely seen in such a cottage, and its mistress will readily appreciate the difference between it and the more common way of compelling every person who wishes to go up stairs, to pass through the kitchen. The cellar, which should be under the whole of the main part, is reached by a door leading from the kitchen, under the chamber stairs. Two good bed-rooms are provided in the attic, each with ample closets.

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[*] This valuable little work has been issued annually for six years, and is pronounced "a complete encyclopedia in miniature" of all Rural Affairs. The Number for 1860 contains no less than One Hundred and Eighty Engravings. See Advertisement in another part of this paper.

The window and door hoods, and the verge boards, are the only non-essentials of the exterior. But we believe that whoever builds a cottage like this, can poorly afford to dispense with them. Their cost need be very little, while the air of neatness, content, and rural fitness which they confer, can hardly be over-estimated. If the interior be made to correspond, by taste in its arrangement, by a few pictures and graceful curtains and flowers, a cottage as inexpensive as this may be made to express more of happiness and refinement, than can be got out of many statelier and more ambitious mansions.

The estimated cost of this cottage varies from $250 to $350.

DESIGN II.

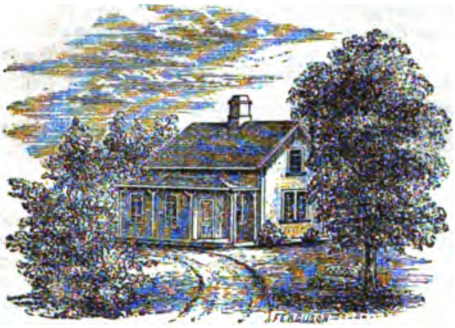


Fig. 4.—Perspective View.

The accommodation afforded in this design, perspective view, fig. 4,) is the same as in the preceding one, with the exception of an additional chamber. The kitchen, however, is larger, and the living-room has a pretty window-seat and two closets. This way of obtaining closets in a room which would otherwise be destitute of them, has much to recommend it. It improves the appearance of the room, while it lessens but little its apparent size. The accompanying cut (fig. 5) will give a good idea of their appearance and construction.

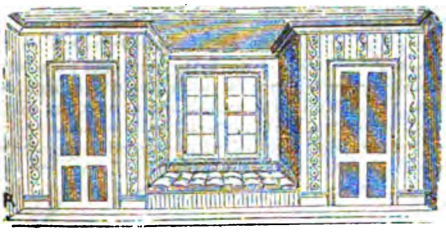


Fig. 5.—Window Seat.

The exterior we have given to this design is a very common one, and requires no explanation. It may easily be improved in appearance by carrying up the central portion of the lean-to as high as the main building, as indicated in figure 6. This arrangement would give an additional room on the second floor. The dotted lines in the chamber plan (fig. 8) show how it might be done. The chimney is located in the center of the house where all heat is saved, and where it is accessible to the stove funnels on every side. The passage between the kitchen and the living-room may have a door on each side, so as effectually to exclude all noise, heat and odors from the kitchen. The cellar is reached from this passage, and opposite the cellar door is a small closet. The cost will vary from four hundred to five hundred dollars.

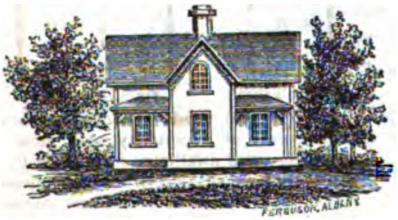
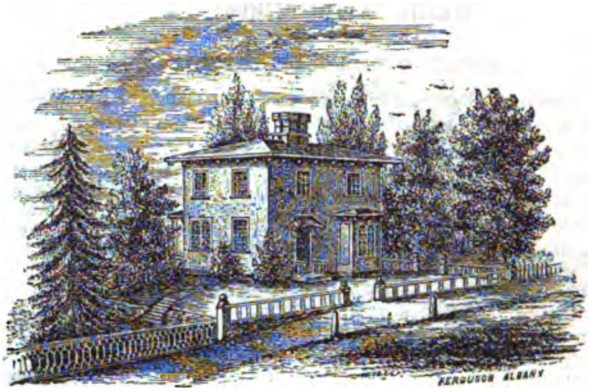


Fig. 6.



Design 3.—Perspective View.

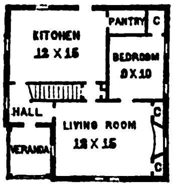


Fig. 7.—Principal Floor.

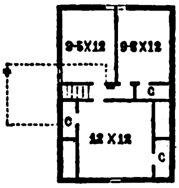


Fig. 8.—Chambers.

DESIGN III.

This cottage is properly a suburban one, and should not be built far away from some town or village. Its form is well adapted to brick or concrete, as it is nearly square, and has a broad, overhanging cornice. The square bay in front, the circular-headed door and the double windows, are the distinguishing features of this cottage. The accommodation is about the same as in the two preceding designs. The hall, however, has a more villa-like breadth, and the living-room has three cases of book-shelves, which should be enclosed by glass doors. The large bay increases the size of the room, and adds greatly to its elegance. The bed-room opens from this room in the plan, but can be made to communicate also or solely with the kitchen, if desired. The kitchen has two good closets, from one of which the cellar stairs descend, and a good-sized pantry. This pantry, and the partly enclosed veranda, and space for fuel, is simply a piazza with enclosed ends. Where neighboring houses are quite near, as is often the case in in a suburban district, it is desirable sometimes that some means be adopted to ensure privacy, and we know of no better way than that here indicated.

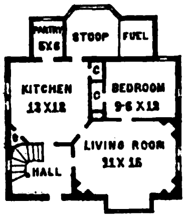


Fig. 10.—Principal Floor.

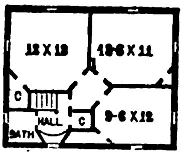
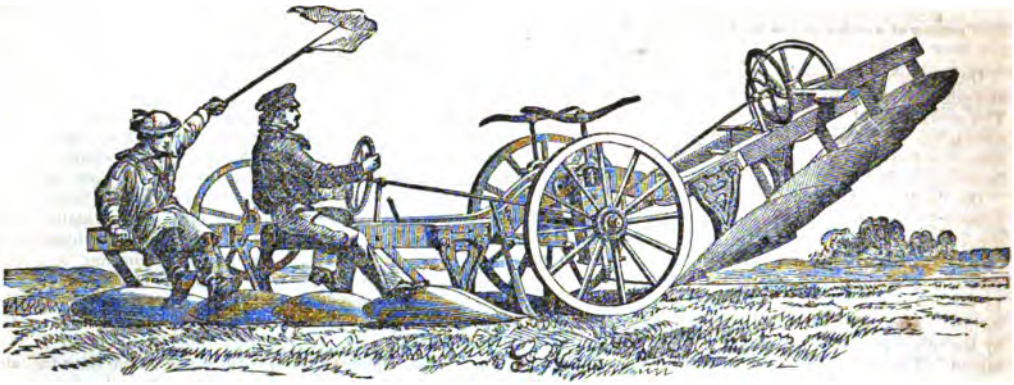


Fig. 11.—Chamber Plan.

The arrangement shown in the chamber plan (fig. 11) is a very happy one, as by no other way could so good room be obtained in the same area. The corners cut off supply the necessary closets. The hall has a closet and a window-seat, and a bath-room is supplied on the left.

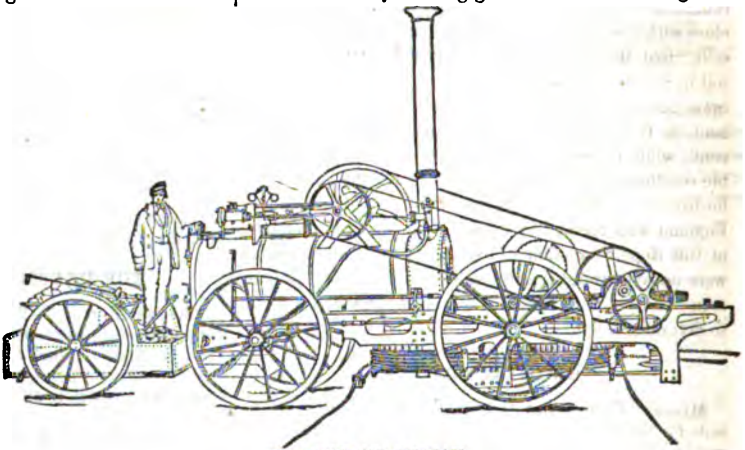
The entire cost will be from $600 to $800.



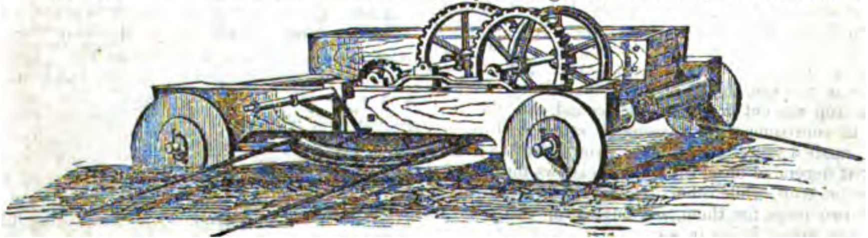
FOWLER'S STEAM PLOW—ARRANGEMENT OF THE PLOWS.

FOWLER'S STEAM PLOW.

We are not altogether certain that more has not been said of late upon the subject of Plowing by Steam, than its importance with the great majority of our farmers really deserves. But we cannot forbear giving these illustrations of Fowler's invention—the one which has proved itself the most successful in all the foreign trials—because we think no engravings of it have before appeared in this country; it is to the courtesy of the manufacturers, Messrs. **Ransomes & Sims**, of Ipswich, England, that we are indebted for the opportunity of presenting them at this time.



THE ENGINE AND WINDLASS.



THE ANCHOR PLACED ON THE OPPOSITE SIDE OF THE FIELD.

The arrangement of the plows is such—as seen in the engraving at the head of this page—that no *turning* is necessary; one set of shares is inserted in the ground when plowing in one direction, and the other set in returning. The *second* cut shows the engine which furnishes the power, and which, standing on the headland, draws itself very gradually from one end of the field to the other, as its surface is gone over by the plows, while in a similar way it also causes the *anchor* represented in the *third engraving* to advance along the opposite side of the field from that on which it is itself placed. A line of wire cable is drawn, by means of the windlass attached to the engine, backwards and forwards upon the pulley on the anchor. For example, at starting the windlass is turned so as to draw the set of plows from the engine across to the anchor, turning four furrows at once; the motion is then reversed and the plows are drawn back again, making four more furrows as they return.

The attendance required includes an engineer, plowman, man at the anchor, two boys to shift the wire cable from time to time out of the way of the plows, and a water cart to supply the engine. The following extract from the committee's report at the Royal Agricultural Society's Chester Show will be read with interest, for it includes an estimate of the exact cost of working involved in the use of this ponderous affair:

"The trials were commenced in light land, and continued in a field where the soil was a strong tenacious loam, in a very dry and indurated condition, and matted together on the surface by a strong growth of thistles and grasses. An experimental trial with a Wilkie Plow (swing) gave a dynamometrical result of 51 stones, or 6⅜ cwt., as the traction power required to turn a 6 by 9 furrow, thus showing it to be fully equal to a strong three-horse soil. The daily working of Fowler's Machines we estimate as follows:

Engineer,	£0	5s	0d.	say	$1.25
Plow and anchor men,	0	6	0	"	1.50
Two boys,	0	2	0	"	.50
Water carts,	0	5	0	"	1.25
Coals, 10 cwt.,	0	10	0	"	2.50
Oil, etc.,	0	1	0	"	.25
Removal,	0	4	0	"	1.00
Interest at 5 per cent., and wear and tear at 15 per cent. on first cost (£650, equal					

to $3.250 nearly), assuming 200 as the number of working days in the year,..	0	13	0	"	3.25
	£2	6	0		$11.50

On the light land the work was performed, including stoppages, at the rate of 7¾ acres per day of ten hours.—The actual rate of travelling, while the plows were in full swing, was 3.83 feet per second, which gives about 1.031 acres per hour, the soil moved (four plows) being 3 feet 4 inches wide by 6 deep.

On the heavy land, 4 acres, 3 roods, 12 poles were plowed in nine hours, thirty-nine minutes, equal to five acres per day of ten hours; the same sized furrows being taken with Cotgreave's Trenching Plow, the rate of work was of course greatly diminished. The furrow was 12 to 14 inches deep, while the width (two plows used) was 20 inches. About the same quantity of soil was removed as by the other plows;* but a little more power was consumed. The work done was just 40 poles per hour, or 2½ acres per day.

These results enable us to give the cost of plowing, by Fowler's machine:

Of light land at,	£0	6s.	0d.	per acre,		$1.50
According to the rate of work done in trials, or taking six acres per day as the average, at	0	7	2	"	"	1.79
Of heavy land,	0	9	2	"	"	2 29
Of trenching ditto,	0	18	4	"	"	4 58

Our estimate of the quality and value of the work thus performed is that the light land could not have been done by horse-power for less than 8s. ($2) per acre; that the heavy land could not have been plowed by horse-power for less than 12s. 6d. ($3.62) per acre; and that the trenching could not have been done by horse-power at all.

The Committee further express the opinion that these estimates of expense represent the extreme maximum, and close with the award of the $2,500 prize, and the conclusion "that Mr. Fowler's Machine is able to turn over the soil in an efficient manner, at a saving, as compared with horse labor, of, on light land 2¼ to 25 per cent.; on heavy land, 25 to 30 per cent.; and in trenching, 80 to 85 per cent., while the soil in all cases is left in a far more desirable condition, and better adapted for all the purposes of husbandry." While we met with several gentlemen in England who seemed to think the hearty commendation of this Report sanctioned by the facts of the case, we were not convinced that the sober sentiment of "practical men" had yet been brought to look at the subject in quite so favorable a light.

GROWING CLOVER.

Messrs. Editors—As hay has been a short crop, and sells for high prices, and consequently is receiving considerable attention, it has occurred to me that a few thoughts on the advantages of raising clover may not be out of place, besides the general advantages of clover in a rotation of crops and in improving the farm. The past season has shown that there is some things peculiar to clover which should not be forgotten. One of these was that while the crop of grass was nearly ruined in old timothy meadows by the June frost, clover was not injured, although it was not very heavy in consequence of May and June being very dry; but if the first crop of clover was less than an average, the second crop made it up. Where the first crop was cut in season, the second was the best, having in consequence of seasonable rains in July and August, made a taller and thicker growth, so that now those that depended on old timothy meadows for hay have a very short crop, while others that had good clover fields, and cut two crops for them, are buying up cattle at the present low prices, being in some instances able to winter more than their usual amount of stock—or where the second crop was saved for seed, will have a good crop of clover seed to sell, with good prices in prospect, in consequence of a large portion of the second crop, that is usually saved for seed, having been cut for hay.

Again—the raising of clover for hay and seed both, does not receive the attention its importance demands in the grain-growing sections of the country. Comparatively few farmers seem to understand that instead of all the trouble and expense of putting in and taking care of an exhausting grain crop, a crop of clover, which, if well managed, would often amount to more money, and not only improve the land during its growth, but furnish materials for five times the amount of manure usually made from a crop of grain, may be raised with very little labor and expense, except the trouble of gathering, and that this is mostly done when other work is not pressing.

Nor is it as difficult to raise clover seed as it is supposed to be by many farmers. On good dry land, clover may be sown with wheat, rye or barley, and if the grain is well put in and a dressing of plaster given at the time the clover seed is sown, it will generally take well, and give a good crop. Then all that is necessary to be done in order to get a good crop of seed, is to be sure and cut the first crop in good season; from the 25th June to 4th July is usually the time. The crop of seed is generally cut the latter part of September, when other work is not driving. Getting out the seed can be done at any leisure time in the winter. The straw and chaff will go far towards paying for the operation, being valuable for bedding and manure; and when all is done, the farmer will find that he has a crop that will bring him the cash, and one that he has probably raised easier and cheaper than any other product of his fields of equal value.

There are other advantages in raising clover which may be briefly mentioned, as in consequence of its early quick growth and the depth to which the long tap root descends, clover is less liable to be affected by summer droughts than any other kind of grass usually cultivated on dry land.—So, also, where a considerable amount of feed is wanted in the middle or latter part of the season, clover, which may be cut on or before the first of July, will start again and give a good bite, sooner, perhaps, than any other kind of grass. Also in seasons of excessive drouth, clover fields that were intended for seed, will be found a valuable resource for pasture, as they will generally give a good run of fresh feed when other meadows and pastures are badly dried up. F. *Orleans Co., N. Y.*

TOP-DRESSING MEADOW LANDS.

Messrs. Editors—The subject proposed for discussion at the Lecture room of the Agricultural Building, during the holding of your State Fair in October, viz., "The application of manures to the soil," will ever be a fruitful topic for farmers to think upon, both in the United States and elsewhere.

In all latitudes where winter prevails with as much severity as in some of the middle States, all the New England States, and the British possessions of North America, it becomes a great object with the agriculturist, to render his fields as productive as possible of nutritious hay for winter consumption and good pasture for summer feed. Upon this subject, therefore, you will allow me to make some remarks relative to New Brunswick practice.

In the vicinity of the city of St. John, there is an extensive tract of flat land, known as the "marsh," which was originally overflowed by the sea, but from which it is now kept out by an "aboideau." The marsh contains several thousand acres; and the farmers who occupy it, devote it principally to hay. Its proximity to the city enables them to purchase large quantities of manure, which, with the exception of what is applied to the production of turnips, carrots, &c., is all put upon the meadows as *top-tressing*. The land being of a spongy nature and liable to run out quickly, it is all ridged up in lands, varying in width, according to the nature of the soil. The material from the ditches is used, as far as it will go, to compost with the manure. Some farmers haul manure daily from the city, placing it in large heaps alongside fields which need it most. After the hay is taken off—from the first of September till late in the fall, the top-

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	FURROW-SLICE.		
	BREADTH.		DEPTH.
* By ploughs,	40 in.	by	6 in.
Cotgreave,	20 in.	by	12 in.

dressing goes on—sometimes with the compost, at others with the dung. Early in the spring, after the snow goes off, and while the ground is still frozen, so that wheels will not cut up the surface, dung is hauled in and spread fresh from the wagon. The manure is principally made from horses, and there is not a great deal of straw through it, so that it spreads evenly and lies close among the roots of the grass. This land averages from two to three tons per acre, and rents frequently for £3 an acre.

In connection with the production of hay is the production of milk. The marsh farmers are all, more or less, engaged in this business; and the high condition of the meadows furnishes a large amount of fall food for the cows. Many soil their cows a good deal, and for this purpose use oats sowed thick—upon this soil oats would lodge and be worthless; but by sowing early and cutting when a foot or so high, they get two crops from the same piece of land. In this way the winter accumulation of manure is added to very materially, and, as I before stated, it is all, with a small exception, applied as top-dressing. The farmers, therefore, in this district, are firm adherents to the principal of surface application of manure; for it produces for them a great burthen of hay—an abundance of sweet pasture, and these, a well filled udder in the cow and a big manure heap at the barn.

And now, a word relative to my own practice. My farm contains a clayey subsoil, and is what may be denominated a grass farm. Some years ago I had a field which had become so run down that the hay was hardly worth cutting. In the fall I plowed about an acre in ridges and top-dressed it the following spring with barnyard manure, at the rate of 25 loads to the acre, harrowing it in well. I sowed oats and seeded down with timothy and clover seed. The crop was an excellent one, and the catch of grass seed first-rate. The next fall I plowed the remainder of the field, and treated it in the same way.—The oats yielded at the rate of 40 bushels to the acre.—The next season the yield of grass was good; and after the spring work was over I drew to the head of the field the manure from the sheep-yard and what I scraped up around the barns, and made a compost heap with the soil of the headland—turned it over once—and applied it after haying. Suffice it to say, that my worn-out field yielded, for several years, luxuriant crops of hay and a full bite in the fall, without a particle of the fertilizing element, save the sod being plowed under. Since then I have continued to treat my meadows as the grass becomes light, in the same manner and with equally satisfactory results. J. D. M. Keator. *Hammond River, New Brunswick.*

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BALLOON FRAMES.

[Written for the Cultivator and Co. Gentleman by Geo. E. Woodward, Architect and Civil Engineer, 335 Broadway, N. York.]

In these days of ballooning it is gratifying to know that there is one practically useful, well tested principle which has risen above the character of an experiment, and is destined to hold an elevated position in the opinions of the masses. That principle is the one applied in the construction of what are technically, as well as sarcastically, termed Balloon Frames, as applied to the construction of all classes of wooden buildings.

Since Solon Robinson's description of the mode of building balloon frames, published a few years ago in the N. Y. Tribune, there appears to have been but little further information furnished on the subject.

Who the originator was is not known; the system is not patented. The first approach in that direction is a plan for a portable cottage or tent, or a combination of both, published in Loudon's Encyclopedia of Architecture, some twenty years ago. It is more than probable, however, that the ballon frame has been known since the early settlement of the West, or after the demand for a class of buildings above the grade of a log cabin. The settlers on the prairies, remote from timber, now find, as a matter of economy, that frame buildings are the most desirable, a comfortable log cabin really costing more money; and from the fact of portable buildings or frames being prepared at the mills or larger towns, and with absolute conditions of lightness for transportation and economy in construction, shows pretty conclusively the origin of the so-called Balloon Frames—a frame that, throughout the great West, is almost exclusively used in the construction of every grade of wooden buildings, from a corn-crib to the largest railroad freight depot—adapted to sustaining heavy loads; entirely secure from lateral thrust; without a mortice or tenon or brace; exposed to all the fury of the prairie blasts, it stands, with more than 30,000 examples of every conceivable size and form, a perfect success.

So general is its use west of Lake Michigan and throughout California, that a builder of the old style of timber frame would be regarded with the same sympathy as a man who prefers to travel by stage instead of by rail.

The decreased amount of timber to be used, the whole labor of chopping, hewing and framing dispensed with; the great economy in its construction, and the ease with which any intelligent man who can lay out a right angle and adjust a plumb line may do his own building, are among its recommendations.

The moment the foundation is prepared and the bill of lumber on the ground, the balloon frame is ready to raise, and a man and boy can do all of it. The sills are generally 3 inches by 6 inches, halved at the ends or corners, and nailed together with large nails. Having laid the sills upon the foundation, the next thing in order is to put up the studding. Take a 2 by 4 stud of any length, stand it on the corner, set it plumb, and with a couple of stay laths secure it in position. Nail the stud by four large nails driven diagonally, two on each side, through bottom of stud into the sill. Continue to set up studs on end, 16 inches between centers, around the entire building, and secure each in the same manner. Pay no attention to the length, for they can be readily spliced or cut off when the time comes. Leave the necessary openings for doors and windows. Some prefer to put 4 by 4 studs alongside the window frames and for door posts, and also at the corners, but they are not necessary, unless the building be a large one. The best plan for corners, and one usually adopted, is to place two 2 by 4 studs close together, so they form a right angle, that is, the edge of one stud placed against the side of the other, so as to form a corner. Next put in the floor joists for the first floor, the ends of the joists to come out flush with the outside face of the studding; nail the joists, which are 2 by 11, one to each stud at both ends and diagonally through the edge to the sill on which they rest. Next measure the height to ceiling, and with a chalk line mark it around the entire range of studding; below the ceiling line notch each stud one inch deep and four inches wide, and into this, flush with the inside face of the studding, nail an inch strip four inches wide. This notch may be cut before putting up the studs. If the frame be lined on the inside, it will not be necessary to notch the strip into the studs, but simply to nail it to the studding; the object of notching the studding is to present a flush surface for lathing, as well as to form a shoulder or bearing necessary to sustain the second floor; both of these are accomplished by lining inside the studding—(for small barns and out-buildings that do not require plastering, nail the strip 4 by 1, to the studding)—on this rests the joists of the second floor, the ends of which come flush to the outside face of the studding, and both ends of each joist is securely nailed to each stud; the bearing of the joist on the inch strip below it is close by the stud, and the inch strip rests on a shoulder or lower side of the notch cut to receive it. This bearing is so strong that the joists will break in the center before the bearing gives way.—No tenoned joist in the old style of frame will hold half the weight.

The joists being nailed securely to the side of each stud, the lateral thrust caused by heavy weight, as hay, merchandize, &c., is in the direction of the fibre of the wood.

The tensile strength of American White Pine is sufficient to sustain 11,800 pounds* for each surface inch in its cross section. Medium bar iron will sustain 60,000 lbs. per square inch of its cross section surface, so that white pine pulled or strained in the direction of its fibre is equal to nearly one-fifth of the strength of iron. If, in erecting a building, we can so use our materials that every strain will come in the direction of the fibre of some portion of the wood work, we can make inch boards answer a better purpose than foot square beams, and this application of materials is the reason of the strength of balloon frames.

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* Authority, C. H. Harwell.

When the building is designed for storage, it is customary to set an outside strip into the studding at the ends of the building on which to nail the ends of the flooring, so that the thrust of the building endways is in the direction of the fibre of the flooring, and sideways, as before stated, in the direction of the fibre of the joists.

We have now reached the second floor. A third floor, if required, is put in in the same manner. Having reached the top of the building, each stud is sawed off to an equal height; if any are too short they are spliced by placing one on top of the other, and nailing a strip of inch board on both sides. The wall plate, 1 by 4 inches, is laid flat on top the studding, and nailed to each stud; the rafters are then put on; they are notched, allowing the ends to project outside for cornice, &c. The bearing of each rafter comes directly over the top of each stud, and is nailed to it. Put in the partitions, and the balloon frame is complete, and in labor, strength and economy stands unequalled. If lined inside of the studding with common lumber, and clapboarded outside, it is beyond the reach of harm from any test within the bound of reason, and, I will venture to say, unapproachable in strength and durability by any form of the old fashioned style of frame.

This style of frame can be used with confidence for barns of all sizes, for all manner of dwelling houses, outbuildings, &c., and can be put up by anybody of the least mechanical genius. In Rural Architecture it is a good desideratum, and although ridiculed by eastern mechanics, it will assume the same importance that it has and still occupies in the West.

There are many different plans for building these frames. Some lay the first floor, and commence the frame on top of it—others, for small buildings, put in the studding 4, 6 or 8 feet apart, with horizontal strips between, which is a good plan where vertical siding is used—others tenon the studs and mortice the sills—not desirable, as it injures them, makes more work, and hastens the decay of the timber.

A first class balloon frame should be lined, if for vertical siding, outside the studding—if horizontal siding is used, line inside; it makes the frame stiffer and the building warmer. Some line diagonally, say from center next the first floor towards extreme upper corners both ways; others line one side diagonally in one direction, and the other in an opposite direction. This makes assurance of strength doubly sure. If lined inside, nail perpendicular lath to the lining 16 inches from centers, and on this lath horizontolly for plastering.

If the house be much exposed, fill in between the studding with brick turned edgeways, and laid in mortar.—Put up in this manner the balloon frame building is as warm as any other known style of wooden building. No Hook and Ladder Company could ever pull it down; they might roll it end over end, like a basket, and with as little success of destroying it.

It has been thoroughly tested in every position, and found fully adapted to every known want for which wooden buildings are required, mills and manufactories excepted. Buildings for storage should have timber adapted for their uses; but the cutting of mortices and tenons, and boring auger holes, thus reducing a heavy stick of timber to the strength of one very much smaller, is a decided mistake. If the rural community want stronger buildings at a much less price, let them adopt the balloon frame.

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Cow Stables.—G. C. Warren of Medina Co., Ohio, writes to the Ohio Cultivator, that he has secured clean cows by raising the floor where they stand two inches above the remainder of the floor, and just long enough for them to stand upon—from four to five feet—according to the size of the cow. They lie on the raised floor, while the manure falls below.

THOUGHTS SUGGESTED BY "LIEBIG'S LETTERS."

The Country Gentleman has lately contained a series of articles in review of the last publication from the pen of this distinguished chemist. We cannot make room for the whole of them in The Cultivator, but have selected the followidg extracts:

The Nutrition of Plants.

In the interior of the plant, chemical changes are perpetually going on, which convert potash, ammonia, phosphoric acid, &c., into parts of its solid tissues, thus removing them from its juices or sap. Even a portion of the water, which this movement excites as the chief ingredient of the juices of a growing plant, becomes shortly a part of the plant itself—is solidified in the shape of starch or sugar, or other substance.

Now, let a plant be situated in the soil with its roots in contact with soil water, (which is often mere moisture, but is, nevertheless, always water holding in solution, in all fertile soils, a sufficient though exceedingly minute portion of mineral matters,) and the way in which it is fed is as follows:

By the chemical changes that occur in the plant, the various substances that now are contained in it, in the liquid form, viz., water, and the well known organic and mineral ingredients of the vegetable juices, are being constantly removed from solution, and deposited in the solid form. *If, then, there exist externally to the plant, matters that can restore the original composition of the juices, these matters must diffuse through the root cells of the plant inwardly, and restore the osmotic equilibrium.*—Thus the plant behaves toward all the substances which it requires for food, just as a piece of caustic potash towards carbonic acid gas, and no matter how dilute the solution of these bodies may be, they are still accessible to it.—Thus, in the water of the ocean grow the sea weed, which, having one slight point of attachment to the rocks, spread out an enormous surface to the water, and gathers from it not only the common salt which is so large an ingredient of its native element; but also the much rarer potash, phosphoric acid, &c.; and in addition to those ingredients ordinarily met with in land plants, the interesting element, *iodine*, is found in them. The iodine of commerce (extensively used in photography, and misused in medicine,) is nearly all obtained from the ashes of sea weeds, yet this body is doubtfully, or not at all detectable even in the concentrated mother liquors coming from large quantities of sea water, though the chemist possesses the most delicate tests for it, being able to recognize it with the greatest certainty when it forms but 1–100,000 of a liquid.

The fact that sea-weed, or the plants that are reared in close green-houses, or in Ward's cases, where no evaporation of water from their leaves can take place, and where consequently much *transpiration* of water is out of the question, demonstrates that there is no connection between the amount of water exhaled and the quantity of matters absorbed by vegetation.

Liebig versus Lawes.

Latterly we hear more abroad than in this country, of the "mineral theory" of Baron Liebig, and the "nitrogen theory" of Lawes, Stockhardt and others; and there has arisen in Germany and England, a long and bitter controversy between the representatives of these theories. Each of the opposing parties in this conflict would lead their readers to suppose that the other side of the question from theirs was utterly wrong, and could be maintained only by the hopeless victims of prejudice and ignorance.

On the one hand the impression is conveyed that Liebig regards ammonia, (nitrogen,) as of trifling importance as a manure. On the other, it has been distinctly gathered by the lookers on, that Lawes is satisfied that agriculture has all its wants supplied, if only ammonia (and phosphoric acid) can be had in abundance. But if we look carefully into the matter, we find that the disagreement is, after all, more in expression than in idea. Both Liebig and Lawes believe that phosphoric acid and ammonia are indispensable; both believe that the alkalies, earths and other ingredients of the ash of plants, are necessary to the growth of vegetation. They differ in their estimate of the relative importance of these ingredients, and of the precise function which some of them perform. * * * *

Now, while it is perhaps true that Lawes has attached undue importance to the direct effects of ammonia, it is also true, as has been remarked, that Liebig by his ingenious advocacy of the opposite view, has left the impression in the minds of many of his readers, that he attaches *no* value to artificial supplies of ammonia. Many isolated paragraphs of his late writings, do indeed justify such an impression, but if we take the trouble to get at the true meaning, by comparing different chapters of this book, we find his ideas are tolerably correct.

The argument of Baron LIEBIG is essentially as follows: The atmosphere is an unfailing and sufficient source of nitrogen, as shown by its supplying all the wants of the most luxurious natural vegetation, and by the fact that this element accumulates in the soil of prairies and forests. Those cultivated crops, too, in which the most nitrogen is removed from the field, (peas, clover, and root crops,) are those which, in practice, are found to be least benefitted by nitrogenous manures; and, *therefore*, we must seek to explain the action of such manures on other crops, as the cereals, whose growth they favor so greatly, by some *indirect effect*. This view is further supported, according to Liebig, by the fact that all soils, even those which are infertile, contain a large amount of nitrogen, immensely greater than is yielded by the heaviest dressings of guano. Our author thus teaches us that,

> "As our cultivated plants undoubtedly absorb through the leaves as much nitrogenized food, in the form of ammonia and nitric acid, from the air, as well as dissolved in rain and dew, as uncultivated plants which receive no nitrogenized manure from the hands of man; we can therefore conceive that the agriculturist will seldom have to seek the reason of his poor crops in a deficiency of ammonia or nitrogenized food alone."

Effects of Nitrogenous Manures.

It has been abundantly proved by many experimenters, but especially by Lawes and Gilbert, that the use of *ammonia alone*, in many cases is sufficient to increase the *wheat crop* by one half or more, even when phosphates, alkalies, &c., are present in excess, while *phosphates* alone have made a crop of *turnips*, on soil that without them yielded no crop, no matter how much ammonia was added.

These facts point to the difference in the nature of various plants, as the true explanation of the contrary effects of manures, and it is most undoubtedly true, that while the natural supplies of ammonia or nitrogenized food, are more than sufficient for the natural vegetation of a country, or for large leafed and slow-growing plants, they are *insufficient* for some of the cereals whose period of growth is short, and whose foliage is scanty.

This principle Liebig arrives at in his sixth letter, and there he unfolds its bearing and application in a highly instructive manner, and fully admits the value of nitrogenous fertilizers, although before he seemingly opposes any such admission, and in fact directly contradicts himself.

Liebig on Stable Manures and American Farming.

Green-manuring, or the use of stable manure made from the produce of the farm, adds nothing but *organic matters* to the soil, and Liebig, by a single stroke of incomplete, and therefore, in effect, false logic, is led to assert the dogma that "*the presence of decaying organic matter in a soil, does not in the slightest degree retard or arrest its exhaustion by cultivation*," it being "*impossible that an increase of these substances can restore the lost capacity for production.*"

Liebig goes on to declare that all the modern devices of high farming, the use of guano and similar manures for the purpose of growing fodder with which to make more yard manure, are only a more systematic, elaborate, and speedy method of exhausting the soil and impoverishing the nations.

"The European system of cultivation called high-farming, is not that open system of robbery of the American farmer, followed by the utter exhaustion of the soil; but it is a more refined species of spoliation, which at a first glance does not look like robbery. It is spoliation accompanied by self-deception, veiled under a system of teaching, the very basis of which is erroneous."

He quotes the Roman agricultural authors, Cato, Virgil, Varro, Columella and Pliny, to show that in their time, high-farming was well understood in its essential points, and declares that "all these rules had, as history tells us, only a temporary effect; they hastened the decay of Roman Agriculture."

The farming of this country is employed as the gloomiest illustration of the "spoliation system." We are well aware that there is abundance of bad farming in this country; but we were not prepared to learn that the ruin of our agriculture is so impending. We know, indeed, that "the early colonists in Canada, in the State of New-York, in Pennsylvania, Virginia, Maryland, &c., found tracts of land which, for many years, by simply plowing and sowing, yielded a succession of abundant wheat and tobacco harvests; no falling off in the weight or quality of the crops, reminded the farmer of the necessity of restoring to the land the constituents of the soil carried away in the produce,"—but it is hard to believe what our author further asserts. He says: "We all know what has become of these fields. In less than two generations, though originally so teeming with fertility, they were turned into deserts, and in many districts brought to a state of such absolute exhaustion that even now, after having lain fallow more than a hundred years, they will not yield a remunerative crop of a cereal plant."!

Nature's Supplies of Mineral Food.

It is not needful to return as much mineral matters to the soil as are removed in the crops, in order to keep up the fertility of a country. If it were, then the inevitable result of certain natural causes would depopulate the globe. The rains, the rills, the rivers, all the sea-ward tending waters are perpetually carrying down *detritus* and solved matters to the ocean, in quantity a million-fold greater than man's best devices can return; but the soil does not for that reason grow poorer. The soil is given to man to use. The materials from which it is made exist certainly in inexhaustible quantity, and for the most part, the soil itself is inexhaustible. If we calculate how many crops are represented by the materials of the soil, we find that on the whole, there is an immense margin for removal, before exhaustion can occur. There are large tracts of country the soil of which is easily exhausted, and slowly replaces itself from the underlying rocks; but on the other hand, there are enormous stretches of territory the soil of which is perpetually and rapidly renewed from subjacent strata of crumbly shales, and others again occupied with a rich soil to a greath depth, capable of supplying the mineral materials for thousands of crops.

It is true, that by constantly removing and never restoring, the soil is exhausted. It is true that even the wheat fields of Southern Russia and our Western Prairies, suffer a reduction of fertility by constant cropping; but it must not be forgotten that these soils, which supply the chief exports of agriculture, restore themselves to such a degree that by *the simplest art they maintain their fertility perfectly!*

The census returns, notoriously imperfect in themselves, do not take at all into account the ravages of insects, the influence of adverse weather, and other causes which conspire to diminish the yield of wheat in the "Genesee country," and accordingly facile writers of the alarmist order, have made it believed abroad that the garden of New-York is almost a desert, while the fact is that the soil there is still extraordinarily fertile. True, their power of production has fallen considerably, but only to such a point that by plowing in clover one year, a perfect crop of wheat is obtained the next; and we are assured that under such treatment, farms in that region have not diminished a whit in their productiveness for 20 years.

Our Doctrine.

Our doctrine is, that every soil admits of the removal of a certain portion of its mineral matters, without impoverishment or danger of exhaustion. The quantity that may thus be removed, is that which a field yields naturally by the simplest tillage, and without manure. It is what the weathering each year renders soluble and available.—The use of manures, or of more perfect tillage, is to supply the excess of matters contained in a full crop over what is contained in the partial one which the unaided soil may yield. It is not necessary on a fair soil, to add as much mineral matters as are taken off, in order to maintain its usual productiveness, and if to any soil, other things being properly adjusted, we add *as much* as is taken off, we increase its fertility, because, then, the disintegrating process constantly increases its floating or available capital.

If, as Liebig's doctrines would demand, the only proper Agriculture—the only plan of farming not ruinous and a system of robbery—consisted in restoring annually to the soil as much mineral matters as are removed in the crops, how impossible it would be to farm profitably in the long run—how impracticable to avoid leaving to our heirs an impoverished soil!

Facts, Opinions and Notes.

[Collated from Books and Papers for THE CULTIVATOR.]

WHEAT—EIGHTY BUSHELS PER ACRE.—S. P. Mason of Walnut Creek, N. Y., tells the New York Tribune how he grew wheat *at the rate of* 80 bushels per acre. "He inclosed with boards an exact rod of dry, gravelly soil, and spaded it eighteen inches deep, mixing in well-rotted clayey turf sifted, to the amount of a cart load, and a peck of salt, half a bushel of ashes, and one pound of guano. Then marked the bed into squares of three inches, and planted, Sept. 10, one grain in a hole two inches deep in the center of each square, using nine grains to each foot, which he thinks is too thick. It came up in eight days, and by Dec. 1 it was a perfect mat, so that the ground was hidden. On this he sifted three pecks of charcoal dust, and when the snow melted off in March the wheat was very green. It was watered a little in a dry time, and harvested July 10, after the birds had taken a share, and dried, and the grain weighed 29¼ pounds. He says if it had been undisturbed by birds the yield would have been full 30 pounds—that is half a bushel per rod square, or at the rate of 80 bushels per acre. The seed was called "California wheat," but whether bald or bearded, white or red, he does not say. Nor does he say whether it would pay to cultivate on a large scale for 80 bushels per acre."

SMUT IN WHEAT—AN EXPERIMENT.—An experiment is related in the Rural New-Yorker, where three plots of ground exactly alike were sown with wheat to test the cause of smut. The first was sown with smut wheat, and [of course] did not grow. The second was sown with bruised wheat, broken in threshing, which some think the cause of smut. A few kernels grew, but produced no smut. The third plot was sowed with good wheat rolled in smut until the kernels were entirely black with it. The product was *one-half* smut wheat.

OATS AND GRASS IN ROTATION.—A writer in the Boston Cultivator proposes the devotion of the farm principally to oats and grass—would plow up old meadows and pastures in summer, and sow the next spring to oats—seeding again to clover, timothy and red-top. After remaining in grass two years he would take another oat crop, and so on in a 3 years rotation. *If* the oat crop succeeded well on inverted sward land, it might pay—but we have never found it to do so. *If* one was sure of getting grass with oats it might pay, but there is *great* risk of a bare stubble instead of a well stocked grass field.

HEDGES.—A late number of the *Rural New-Yorker* has several communications from those who have tried hedges. One in Illinois, who had previously discovered that the Osage Orange was too tender, found that the objection was entirely obviated by shearing at the close of summer, which shortened the growth and made the whole hardier. He has experimented five years—three without shearing, and with failure; and two with shearing, and with entire success. Another correspondent, at Troy, N. Y., tried Hawthorn, but the borers are destroying it rapidly. He has also tried the Newcastle thorn, but although it escapes the borer, it makes a poor hedge. He finds the privet to grow admirably, but the handsome hedge it forms is rather too weak for the farmer.

NEW-YORK STATE AGRICULTURAL COLLEGE.

"The chief object of the institution is to provide a system of instruction essential and practically useful to the Agricultural interests of the State; to combine theory with practice; to afford wholesome discipline to the mind, accumulation of knowledge, and habits of labor and industry."

We think we are only expressing the uniform sentiment of the Agricultural community, when we say we have watched the foundation of the institution,—at the head of whose proposed course of instruction stands the above paragraph,—with not a little anxiety for the result of the experiment. So much seems to us to depend upon its success or failure—the future interests of Agricultural education in the United States appear to be so intimately connected with a project now matured at the expense of much thought, money and time, and which from the position of the State not less than from that of the gentlemen who have been engaged in it, must ultimately lead to great good or to great disappointment—that, in common with every thinking observer, we could not but desire to give all possible encouragement to its friends and managers. And now that a new President has been chosen, and a programme of operations laid before the public, this desire becomes stronger than before. It has been intimated that the President and Trustees propose during the winter to lay the merits and prospects of the College before the farmers of the State, and we bespeak, what we are already sure they must receive, a candid hearing and attentive regard of the facts and arguments they may present.

We condense as concisely as possible, the "outline" which follows the paragraph we have quoted above:—

"Course, three years—two Terms annually. Requisites of Admission—the reading, writing and grammar of the English language, and higher arithmetic; sixteen years of age, and good moral character Instruction, board, lodging, lights and fuel, $200 per annum—one-half semi-annually in advance.

"The studies of the first year are the English language, Arithmetic, Algebra, Chemistry, Mineralogy, Geology, Botany and Geometrical Drawing. Of the second—"Trigonometry, Analytical Geometry, Surveying, Construction of Roads, &c., Agricultural Chemistry, Mineralogy, Geology and Botany continued, Outlines of Comparative Anatomy, Vegetable Physiology, and Drawing"—that is, in the Summer Term alone—the Winter Term is to include "Descriptive Geometry, Engineering, Carpentry, Bridges, &c., Natural and Experimental Philosophy, Agricultural Chemistry, Mineralogy, Geology and Botany reviewed, Human Physiology, Geology and Comparative Anatomy continued, Principles of Veterinary Practice, Book-Keeping, Drawing, Farm Implements, Machinery, Architecture, &c." Of the third year—summer term—"History of Literature, General and Agricultural, Physical Geography, &c., Intellectual and Moral Philosophy, Rhetoric and Logic, Constitution of the United States and of the State of New-York; Laws of New-York relating to Contracts, Highways, Fences, &c.; Book-Keeping applied to the Farm; Entomology, Ornithology, Accoustics and Optics." For the winter term—"Astronomy, Electricity, Magnetism, Meteorology, Intellectual and Moral Philosophy, (including Evidences of Christianity and Natural and Revealed Religion,) Rhetoric and Logic continued, Veterinary Practice; Drawing of Animals, Landscape, Composite, &c."

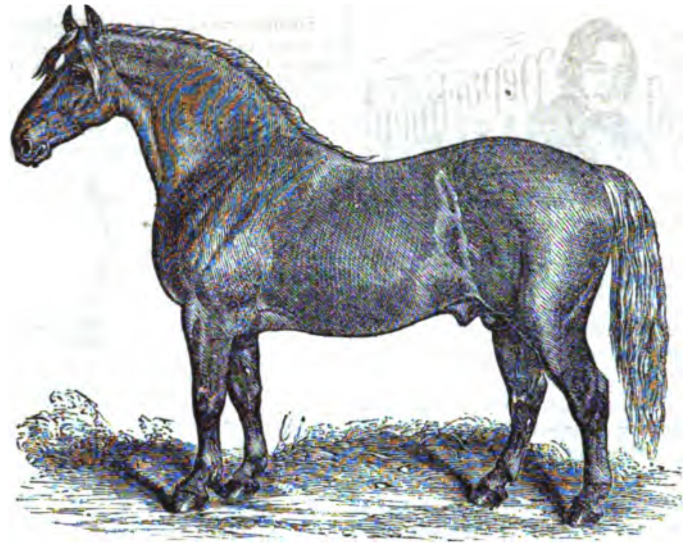
This is certainly a comprehensive list. In the intervals of leisure enjoyed, the freshmen and juniors are to be instructed successively,

"In plowing, spading, care of hoed crops, gathering hay and grain crops, management of the dairy, &c., making and preserving manures, care and feeding of store animals, root and stock grafting, taking and preserving scions, &c., sowing grain, planting, gardening, setting trees and shrubs, making fences and walls, draining and irrigation, training, pruning, grafting and budding, handling teams, loading wagons and carts, collecting specimens of plants, minerals, &c., fattening, breeding, and rearing stock, training steers, handling cattle, training colts to saddle, harness or draught, preparing timber for fences, posts, &c."

An etc. marks the end of each term in this enumeration of the out-door branches of attainment which are promised in two years. The Seniors are to make Topographical Maps for various purposes, collect specimens, have practice in Essays and Lectures, experiment in the laboratory, take charge of *all experiments* in fattening and feeding stock, "&c., &c."

In order to "apply the Theory to the Practice of Husbandry," both of which are supposed to be reflected, respectively, in the in-door and out-door pursuits thus recapitulated, the "students will be required to spend such time in the field as may be necessary."

We have not space for further particulars or remarks. These general facts are submitted for the reflections and conclusions to which they may bring the reader.



"CHESTER EMPEROR"—a Suffolk Horse—the vroprty of G. D. BADHAM, Esq., Essex, England.

THE SUFFOLK HORSES—"CHESTER EMPEROR."

By turning to the account of the Suffolk (England) Agricultural Show, contained in our foreign correspondence, in the last volume of this paper, it will be seen that a sweepstakes prize of $150 open to all England, was won, together with several other premiums, by G. D. BADHAM, Esq., of Bulmer, in the adjoining county of Essex. A portrait of the winning horse, already notable for previous successes, was published in the July number of the London Farmer's Magazine; and we have taken the opportunity to re-engrave the cut for our columns, because its subject has been so generally and authoritatively pronounced a first-class specimen of a breed most valuable to the English farmer. Whether it would be sufficiently capable of bearing our more severe extremities of heat and cold, and of showing the greater activity of which we are so fond, to be worthy of general introduction among us, is perhaps an open question. In the head and legs, often we find it exhibiting a neat, clean and "blood-like" appearance, unrivalled by any other heavy breed, and its compact and muscular frame possesses a weight which the low position of the shoulder is such as to throw into the collar with an immense power. We have no doubt that an infusion of Suffolk blood would prove an improvement upon our draught horses in the city, perhaps quite as much or still more than in those employed strictly for agricultural purposes.

It is scarcely necessary for us to recapitulate the prizes obtained by "Chester Emperor." He was bred by Mr. BADHAM in 1854, and won a premium as a colt in June of that year—making thus an early and auspicious entrance upon public life. He is described, in the language of our contemporary, as

> "A red chestnut horse, with a few grey hairs shot here and there through his coat. He stands something over sixteen hands high. He has the most beautiful blood-like head perhaps ever seen on a horse intended for "agricultural purposes." He has a strong neck and fine crest, good oblique muscular shoulders, deep girth, and first rate loins and quarters. His hocks and arms are also excellent; and be has a small but good foot. He stands short on the leg: and this, with his fine quarter, makes him a very lengthy-looking horse, but still with a short powerful back. Emperor is, altogether, one of the most handsome and symmetrical cart-horses ever seen, possessing in perfection those three leading "points"—great strength, fine quality, and capital action.

We think we had a partial promise from Mr. BADHAM, in parting after a stroll together over the castle and grounds of the king-making WARWICKS,—that we might sometime or other indulge the American privilege of question-asking, in respect to Agricultural matters; and we know that our readers and ourselves would be equally interested in obtaining some information from one so well qualified to give it—as to the breeding and improvement of agricultural horses in the eastern counties, and the probable success with which the Suffolk Punch* would bear our climate. It has been intimated that the breed does not show the activity and nimbleness now, for which it was once noted. We shall be glad to know if breeders have overlooked this point in the pursuit of others, or whether, on the other hand they consider it to have been really maintained.

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HOW TO MAKE BARN-YARDS.

As your correspondent TYRO, has asked this question, I will answer it, giving my plan. First, make the yard level, (large or small,) then commence in the middle and scoop out in the form of an apothecary's scale, deepest in the middle, to the depth of one foot in the deepest place.—Then collect straw, leaves, old hay, bog grass, saw-dust, or any thing that can be made into manure; fill it up level, with a row of mangers around the outside; then have living water in the yard, and when you commence foddering shut the bars or gate, and keep every creature in the yard when not in the stable; then fill up with litter to give them a good bed, and keep doing so until spring, and the manure is three feet deep or more if possible.—Then dispose of it as best you can. Some let it remain until fall and use it for top-dressing; others cart out in spring, and commence filling up again to keep the weeds from growing.

A dry yard is good for nothing to make manure in, while one made from six to twelve inches dishing will always be dry around the outside, and the dish will hold water enough for the mass above to suck from. Have good eve-troughs on all the buildings, to keep out all the water possible. Spread the horse manure from the stable over the yard as fast as made. Sprinkle in ashes, plaster, muck, turf, chaff, &c., and waste nothing, and you will soon have a pile of manure that would greatly astonish some that (falsely) bear the name of Farmers. L. F. SCOTT. *Bethlehem, Conn.*

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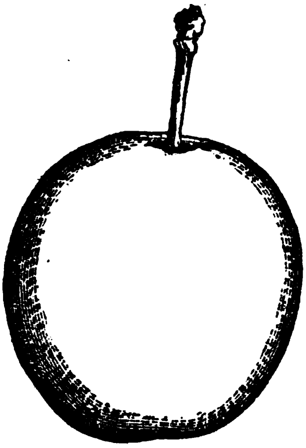
* "THE SUFFOLK PUNCH—so called from his round, punchy form."—YOUATT.

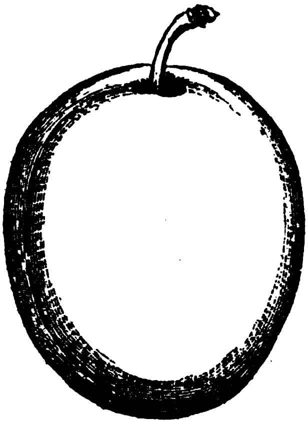
A BASKET OF PLUMS.

For some years past the dwarf plum orchard on the grounds of Ellwanger & Barry, of Rochester, has excited the admiration of all who have visited their nursery at the time of ripening. The high culture, skillful pruning, and assiduous labor in destroying the curculio, bestowed on these trees, have given results which we have never seen excelled and rarely equalled. Those magnificent varieties, the Bradshaw, Pond's Seedling, Victoria, Sharp's Emperor, and Goliath, loading the bending branches which sustain them, are a sight to view! At a recent visit, they presented us with a basket of several specimens, each of a large number of sorts; and as many of them are comparatively new, we believe it will be an acceptable service to our pomological readers to give figures and descriptions of some of the most valuable and interesting varieties.



NELSON'S VICTORY.

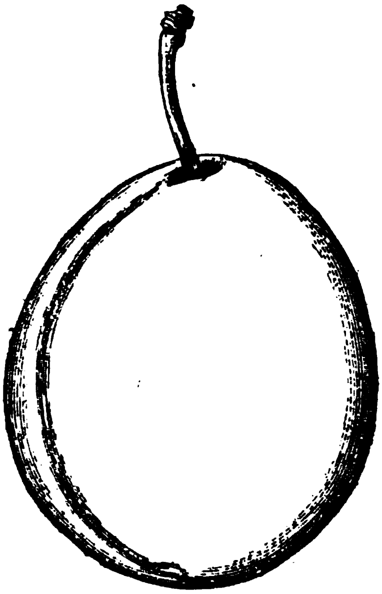
Nelson's Victory.—Medium in size, roundish oval, brownish yellow, with some dull red, stone small, free, juicy good. Its origin is English; the growth is vigorous, and it is exceedingly productive, which, added to its beautiful appearance, will make it fine for market.



SHARP'S EMPEROR.

Fotheringham.—An old English variety from Surrey, in form like the Imperative, very productive, of fine quality, juicy, of a pleasant, fresh flavor; improves by shrivelling on the tree—valuable.

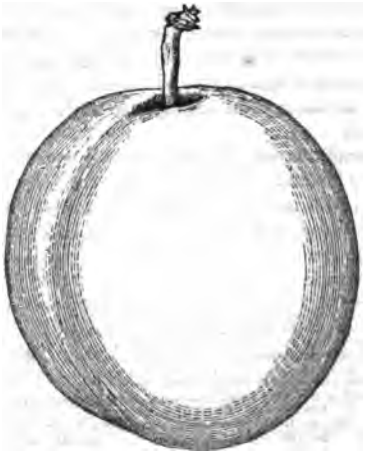
Sharp's Emperor.—One of the best market sorts, large, handsome, very showy, resembling Victoria, but the tree is more regular, not so vigorous, and the shoots less downy.



BRADSHAW.

Bradshaw.—This is a plum of foreign origin, remarkable for its large size, productiveness, and vigorous growth of the tree—qualities rendering it eminently valuable as a market variety. It was described by P. Barry in the Horticulturist for 1855.

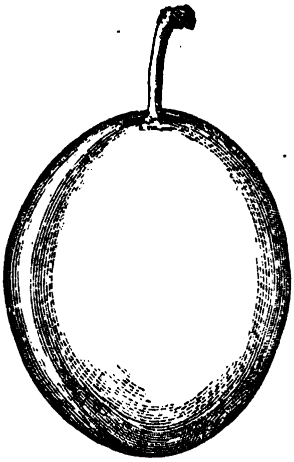
It is of largest size, a large portion of the specimens on thrifty trees measuring two and a quarter inches long, and an inch and seven-eighths cross diameter. It is oval in form, inclining to obovate, sometimes with a very slight neck; suture obtuse; color, dark purple, with a light blue bloom; stalk three-fourths to one inch long, set in a narrow cavity; flesh a little coarse, becoming light brownish purple, at first adhering, but nearly free from the stone when fully ripe; juicy, good, slightly acid; tree erect in growth, vigorous; shoots purple, smooth. Ripens through the two last week's of summer.



GOLIATH.

Goliath.—Large and handsome, roundish oval or roundish oblong, usually larger on one side of the suture, color deep red or greenish yellow, dark purple in the sun, and somewhat mottled; stalk in a very deep and narrow cavity; flesh light brownish yellow, adhering somewhat to the stone, juicey, rather coarse or fibrous, with a brisk, sprightly flavor—"good." English—a strong grower and very productive, and bears young—profitable.

Wangenheim.—Medium in size, oval, suture shallow but distinct, color dark blue, stem rather short, set without depression; flesh greenish yellow, juicy, firm, sweet, rich, "very good," partly free from the rather large stone. This is of German origin, and is a sort of prune; the growth is erect, moderately vigorous, and the tree very productive—it is one of the best of its class.



WANGENHEIM.

Victoria.—Large, obovate, suture distinct, stem half an inch long, in a rather deep and narrow cavity; color a fine light reddish purple; flesh yellow, pleasant, "good," adhering to the stone. It has been long known in some parts of England—stands next to Pond's Seedling in size and beauty, and in productiveness, and is a great grower, rather irregular. It is distinct from and better than Sharp's Emperor.

VICTORIA.

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TO OBTAIN FRUIT IN NEW PLACES.

"I have just come into possession of a new residence, in a region where fruit generally does well, but there is nothing on it in the shape of a fruit tree or shrub, worthy of the name—what can I do to have an early supply of fruit of my own? G."

This is an inquiry that often occurs in the minds of many owners of new places, or who have built new houses on unimproved spots. We can inform such residents that much may be done towards an immediate supply, with proper selection and management—and that the assertion which they often hear, that "it will take a life-time to get fruit" from a new plantation, is an absurd error.

The quickest return is from planting *Strawberries*. If set out early in spring, they will bear a moderate crop the same season. We have repeatedly obtained fine ripe berries seven weeks from the day they were set out; and in one instance where transplanted late with a ball of earth to each plant, in less than six weeks. The second year, if the bed is kept clean, the product will be abundant. Wilson's Albany will safely yield any year, a bushel from a square rod, or about two quarts a day for half a month.

Muskmelons and *Watermelons* will yield their delicious products four months after planting.

Gooseberries, *Currants*, *Raspberries*, and *Blackberries*, all bear at about the same period from the time of setting out. Good-sized gooseberry plants, say a foot and a-half high, will give a good crop for bushes of their size, the second year. We have had a bushel of Cherry currants, the third summer after setting out quite small plants, from a row thirty feet long. A bush of Brinckle's Orange raspberry has been known repeatedly to bear about a hundred berries the same year that it was transplanted—the fruit, however, was not full size.

Dwarf Pears of the right sorts, and under right management, come quickly into bearing. If at the common age when set out, or two years from the bud, the most prolific sorts give some returns the second year, and more afterwards. Older trees, if carefully removed, produce larger crops—we have seen a tree of the Louise Bonne of Jersey, six years old when transplanted, bearing a bushel the second summer afterwards; but much care is required for removing such large trees, and they are not subsequently so thrifty as younger ones, and consequently do not yield such excellent fruit. Among the dwarf pears which bear soon, are Louise Bonne of Jersey, Doyenne d'Ete, White Doyenne, Giffard, Fontenay Jalousie, Josephine de Malines, &c. The following sorts bear nearly as early on pear stock, viz: Bartlett, Seckel, Winter Nelis, Washington, Onondaga, Howell, Passe Colmar, Julienne.

Grapes afford fruit soon—usually beginning to bear the second and third year. The Isabella, York Madeira, Diana, and Delaware, are particularly recommended for this purpose at the North, and the Catawba may be added for the Middle States, wherever it does not rot.

Dwarf Apples should not be entirely overlooked in the list of early bearers. Half a peck per tree is often obtained the third year from the most productive sorts.

A good supply of all the preceding will be sufficient to furnish a family with these wholesome luxuries from within a year or two of occupying entirely new premises; and will not only add greatly to the comforts and attractions of home, but contribute materially to the uniform health of the occupants.

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GRAFTING CURRANTS—PAINT FOR WOUNDS, &c.

Eds. Cult. and Co. Gent.—I wish to inquire if the currant can be successfully grafted? I have some Red Dutch currant bushes three years old from the cuttings, which I wish to engraft with some of the newer varieties next spring. Please to tell me how to do it. Should it be done early?

I also have some fine old apple trees, thrifty and sound, excepting that where large limbs were pruned off many years since, holes have rotted into the trunk large enough to hold a quart or two—can you tell me how to make a composition for filling up these cavities?

Would not Bridgewater paint be excellent for covering the wounds made by cutting off large limbs? I have used the alcohol solution of gum shellac, but upon the whole I prefer yellow ochre paint.

Should winter pears be picked early or late? Some say pick early, others say late. I have found that when my winter pears are picked early, they are apt to shrivel and become tasteless, dry and leathery. An answer to the above questions through The Cultivator, would greatly oblige W. D. *Mass.*

The currant is rarely or never grafted, because it grows so freely from cuttings—to be successful the grafting should be done very early in spring, as the currant starts soon.

The decayed portions of the apple should be cut out or shaved off, and the wounds covered with shellac, paint, grafting-wax, or with a mixture of tar and ochre applied warm. Brickdust, or pounded dry clay sifted will do in the place of brickdust. We do not know the character of Bridgewater paint.

Winter pears should be picked when fully grown. If green and imperfect, they will shrivel, or rot, and never ripen into melting delicious fruit. Many pronounce winter pears valueless, because they give them such poor culture that they never properly mature.

APPLES FROM MAINE.

We were kindly furnished when at the Maine State Fair, by S. L. Goodale, of Saco, with a large collection of the specimens of apples exhibited on that occasion, a brief notice of which may be interesting to our eastern readers. Among those of most interest were the following:

Billy's Pippin.—A fine, large excellent fruit, roundovate, smooth, handsome, shaded and indistinctly striped with rich red on fine yellow ground; the flavor sub-acid and "very good;" worthy of further attention.

Watson's Favorite—A handsome apple, medium in size, roundish-oblate, regular, smooth, with a fine reddish blush on a yellow skin; flesh yellowish, juicy, flavor pleasant, rich, sub-acid, "very good."

Winthrop Greening—This has been long known as one of the best autumn apples of Maine. It is large, rather oblate, tapering slightly to the crown, slightly ribbed, skin yellow with a little green, sub-acid, "very good."

Blue Mountain Sweet—A fair fruit of medium size, roundish and slightly oblate, greenish yellow with a shade of brown; flesh, fine grained, solid, flavor "very good" for a sweet apple.

Bartlett Seedling—A large, roundish, ribbed apple, striped and splashed with bright red on yellow skin—flavor mild sub-acid, "good," or perhaps "very good."

Black Oxford—This variety has already some celebrity as a long keeper—it is nearly of medium size, roundish, dark red; the flesh white, tinged with red, fine-grained, firm, compact, moderately rich, sub-acid, "good."

Fayette Black—Medium in size, roundish, dark dull red, tender, sub-acid, pleasant and agreeable; "good," perhaps "very good."

All of the preceding appear to possess considerable merit, and some are evidently quite valuable. We should esteem it a favor if our friend Goodale would furnish some further facts in relation to the new sorts, their time of maturity, vigor of growth, degree of productiveness, extent of culture, or whether well known or quite local, &c.

GRAPE CULTURE IN CENTRAL NEW-YORK.

Messrs. Editors—In reply to the inquiries of your correspondent, and in response to your own request, I will venture an opinion in reference to the best grapes for this part of our State.

If your correspondent desires to know what grapes are best for general market purposes, I should say, the Hartford Prolific, Concord, and Isabella. The Hartford Prolific bears abundantly, ripens earliest, and is quite palatable.—The Concord follows the Prolific, only a few days behind; is large and showy, both in its berries and clusters, and when eaten at just the right time, is of quite good quality. The Isabella should be planted, of course; for though it seldom becomes fully ripe, it generally becomes blue, and quite pleasant to the taste. It is a great bearer, and prolongs the grape season after the sorts just named have passed away.

I will just add here, that the Logan *promises* now to be an earlier grape than either of the above, and it is thought will not be inferior to any of them in quality.

The three grapes first named should be the planter's main reliance. But as some people will want to buy finer sorts, he had better set out a few Dianas and Delawares. The Delawares will be ready for market along with the Concords, and the Dianas along with the Isabellas, or a week before.

If, however, your correspondent is an amateur, and wishes a good assortment for the supply of his table, I should say—leaving a place for the Logan, in case it fulfills its present promise—plant one vine each of Hartford Prolific and Concord, but devote your ground chiefly to the Delaware, Diana, Rebecca, and Isabella. An occasional taste of the Prolific and the Concord, will serve to show you the superiority of the others.

Several other grapes are now being tested in this region —such as the Anna, Clara, Child's Superb, Louisa, King, &c.,—but their character has not yet been sufficiently proven to warrant an opinion upon them at present.

Clinton, N. Y. A. D. G.

P. S.—If a grape can be found, which neither boys nor birds will steal, I should advise putting that at the head of the list. G.

STARTING BLACKBERRY CUTTINGS.

Eds. Co. Gent. and Cultivator—According to promise I send you the plan I pursued with my blackberry cuttings. I had a hot-bed of fifty sash ready for cucumbers with a strong under heat. I smoothed the surface under five sash at one end of the bed. I then spread the cuttings on the surface of the bed, and covered them about two inches with light mould, and then put on the sash and tended them the same as the cucumbers, and in five days they commenced coming up, and in ten days the bed was covered with briars from one to six inches high. I now took the sash off in warm and moist days, and put them on again at night, and by April 20th I had plants eighteen inches high, which was twendy days from the time I started them; and on 22d of April I set out a few of the strongest, and although there were several very hard frosts they started and grew finely. May 9th I set out another lot which did very well. May 20th I set out another lot which on account of the ground being too dry, about half died—the remainder started slowly. June 1st I set out another lot which did well.

Now for the result, (Nov. 1st)—the first planting will average four feet high, and very branchy and strong; the second is fully as good as the first planting; the third planting, what is standing, will average two feet; the last planting is fully as good and all standing.

To make a plantation, the cuttings should be procured in the fall or fore part of winter, and tied in bunches and buried in the cellar, in order to have them ready in time; and the hot-bed should be put up the first of March with a good strong heat, the same as for cabbage. The bed should be kept well aired and moderately moist, and the cuttings (about three inches long) spread rather thin to make strong plants. There should be about one hundred plants under a sash of three by eight feet, and when the plants get up about a foot high, the sash should be taken off in moist or warm days, to make them strong and hardy; and about a week before setting out, cut them off four inches above the ground, which will prevent wilting in the field, and they can also be more easily handled.—Plants treated as above will be ready to set out as soon as the ground is in growing order, and will be better rooted than suckers from the nursery, and can be raised for $1 per hundred. Market Gardener. *Pittsburgh, Pa.*

INCREASE OF STRAWBERRY PLANTS.

The rapid increase from a single strawberry plant in the course of a few years, under favorable circumstances, can be hardly comprehended by one who has never observed this increase. There is a great difference in varieties. In rich soils, some will occasionally produce a hundred in a single year, but calling the number but thirty, the yield would be 900 at the end of the second year; 27,000 at the end of the third; 810,000 at the end of the fourth; 24,300,000 at the end of the fifth; 729,000,000 at the end of the sixth, &c. Cultivators who do not wish to pay high prices per hundred for new sorts, may soon obtain all they need by increase.

The Flower and Kitchen Garden.

Treatment of House Plants.

The wants of plants cultivated in the winter, are the same as in summer; they are heat, moisture, sun and air. Of the first they generally have too much; of the latter three they rarely have enough. They are most frequently kept in a room heated up to 70°, which is much too hot. The great majority of plants will do better until they begin to bloom, with a heat not exceeding 45° or 50°. If you have a room with windows facing the south or east, in which the temperature can be kept generally at 50°, and never fall below 40°, your plants can probably be kept in good health and condition, as far as heat is concerned.

With regard to moisture, it is more difficult to meet the wants of the plants. You may drench the roots with water, but that is not all they want. They desire a moist atmosphere, which it is impossible to give them in a room heated either with a stove or by pipes from a hot air furnace. If, however, your plant room is so situated that it receives its warmth from an adjoining room, the communication with which may be closed at pleasure, the air may be kept much moister in all moderate weather, than where they are in a stove room. Your plants will need not only water at the roots, but they will also require frequent waterings of the foliage, which is not only refreshing to them, but also serves an important purpose in removing the dust with which the leaves soon get covered, and which greatly obstructs the respiration of the plants. Those with polished leaves, such as the Orange, Myrtle, Wax plant, Pittosporum and the like, should have the leaves frequently washed with a sponge. In watering, some discretion must be used. All plants do not require the same amount. Those which are in a state of rest and consequently not growing, need but little; those which are in an active state of growth and blooming or forming flower buds, need considerable. The soil will frequently seem to be dry in spots, when in fact it is not. Nurserymen tell when the plants need water by striking the pots with the knuckles, the sound being quite different when the earth is moist, from that when dry. Water should never be allowed to stand in the saucers.

As to exposure to sun-light, the plant stand should be situated so as to receive the benefit of the whole. The plants should be as near the glass as possible. Light is the life of plants as well as of man. When grown in darkness they are invariably spindling, weak and colorless.

Air should be given freely whenever the weather is mild. The windows should be drawn down from the top, so that the cold air may not strike directly upon the plants.

It is almost needless to say that the utmost neatness should prevail in the plant-room. No dead leaves, stalks or decayed flower stems should be allowed to remain. When requisite, neatly painted wires or sticks should be used to support the stems. The pots should be washed occasionally.

There is no doubt that the trouble and care of tending plants adds greatly to our enjoyment of them. Most of those who possess spacious green-houses and gardeners to do all the labor necessary therein, take but little interest in flowers, as compared with those whose labor and time have been lovingly given to the occupation. G. B. H.

The Hubbard Squash.

The Hubbard squash has (in my opinion,) sustained its eastern reputation in the west, as an A No. 1 squash.

East Desmoines, Iowa. S. M. Dyer.

The Feejee Tomato.

The seeds of the *Feejee* tomatoes sent Mrs. Gillet of Ogdensburgh, have done remarkably well, and she considers them a fine and desirable variety—being very large, the flesh being compact and firm—the color of a more cherry red than other tomatoes. She sends a few seeds from the first tomatoes that ripened. They have very few seeds. G.

The Cassabar Melon.

This melon belongs to the Cantaloupe family, and is, we think, the best we have ever met with. It grows to a large size—long in shape, frequently measuring from 16 to 20 inches in length, and corresponding in diameter.—The flesh is fine grained, tender and very juicy, and of a greenish color. The melon from which I got my first seed was 24 inches in length. It is very productive, more so than any variety I know of.

I have some of the seed of this excellent melon, and I would like to see it more generally cultivated. I will send a package of the seed to any person who wishes to give it a trial, upon the receipt of a few postage stamps to pay the postage and cost of putting up. I raise no seeds of any kind to sell, but will share any kind which I have with those who wish to give them a trial.

I have also a small amount of the Honey Cantaloupe, a very good melon, which I think ranks next to the Cassabar melon. If my supply of the first runs out, I will send a package of the latter instead of the Cassabar melon.

Curwensville, Clearfield Co., Pa. F. A. Fleming.

The Apple-Pie Melon.

I have raised in my garden, from *one seed*, of the Apple-Pie Melon, nine melons, weighing altogether 185 pounds—the largest one weighing 45 pounds. F. A. Hoyt.

Germantown, near Philadelphia.

I notice a communication from G. W. Brower of Schenectady, stating that he raised several apple-pie melons "averaging 26 pounds each." My father raised four of the melons, the largest weighing 53 pounds, the next in size 38 pounds. The other two he did not weigh.—"H. G. W." wishes to know how to make pies and preserves—also how to determine when they are ripe. The following I take from the "American Agriculturist" for October: "When ripe, which can be known by the melon turning yellow, or the seed black, remove the seed, pare and slice the flesh in small pieces, and then stew it in water just enough to have it like stewed apples; when done, add sugar, spices, *and a little acid.* Tartartic acid or lemon juice, or good vinegar may be used; the latter, however, does not make as good a pie. A tablespoonful of lemon juice to four pounds of melons I think the best proportion. The quantity of sugar must be in proportion to the acid. Without the acid the pie is tasteless. Do not put the sauce in a copper vessel."

Bridge Creek, Ohio. Rebecca W. Peabody.

As the Apple-pie melon question seems to be an open subject, I will tell you of our success in raising them the present season. We planted a few seeds—perhaps half a gill or more—in a row or two of sugar cane, the same as we plant pumpkins among corn. The land is a light sandy soil, and has never been manured. They sprung up and grew rapidly, and the result is half a wagon-load or more of fine large ripe melons. We weighed one the other day, which weighed 26 lbs., and many more are nearly or quite as large.

I have not yet tested them for pies, but stewed in Chinese molasses they make excellent melon-butter, or preserves. Irene Cole.

Flowerville, Ind

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Seeding Down Young Orchards.—The *Gardener's Monthly* is an excellent practical paper, and we are therefore surprised to see in the last number a recommendation to seed down a young orchard the next spring after planting, with orchard grass. This recommendation is the more extraordinary as it immediately follows directions for the management of dwarf pears. All we ask the editor, is to try this mode alongside the practice of keeping up a system of *broadcast* cultivation by horse labor. We have seen both ways tried so often, with such invariable and striking results, that we supposed the matter settled long ago with all intelligent cultivators.

The Grazier and Breeder.

BEDDING FOR FARM STOCK.

No farmer undertakes to winter his horses without some sort of bedding for them, either the usually abundant and inexpensive material of straw, or the more valuable refuse hay from the manger. The "hard boards" would leave too evident marks of discomfort, the labor of cleaning would be much enhanced, and some horses *would* help themselves without stint from the hay rack, if allowed to do so. Hence we need not urge particularly the importance of giving an easy resting place to this portion of the farm stock, but there is need, we think, that something be said on paying the same attention to the other tenants of the barns and yards, and also upon the best materials for the same.

This year the usual material for bedding is, in many places, demanded for more important uses. Straw and all coarse fodder will be husbanded with care, and dealt out with economy, as, indeed, they should be every winter.—But we need not therefore give no bedding to our cattle —our oxen, cows and calves—nor should our sheep be left without a dry, soft spot to lie upon—or our pigs be refused a nest into which they can crowd for warmth and comfort.

The woods, with their abundant crop of *leaves*, will supply a most excellent material for these purposes. If gathered while dry, and stored under shelter, they will furnish soft bedding for any animal, and add also largely to the value of manure. Leaves absorb a considerable amount of liquid and decay quickly from exposure, and the quality of the fertilizing matters they supply is superior to most other materials used for bedding.

Anything which promotes the comfort and quiet of our farm stock, promotes also its thrift and productiveness.—A horse or ox is in better condition for labor the next day after passing an undisturbed night's rest upon an easy bed, than if forced to stand or lie in discomfort—a cow will give more milk, a fattening animal will take on more flesh; and all upon less food than would otherwise be required.

Leaves in the country are abundant and easily secured. In towns, dry sawdust, chips and shavings from laths and planing mills, spent tan-bark, dry muck, and the like may often be obtained more economically than straw or coarse hay. And to any one near a sawmill or tanyard, the sawdust and tan-bark furnish valuable material both for bedding and manure. We hope these or leaves, or all of them, will be gathered and stored by every farmer who has not an abundance of straw to give every animal in his stables or sheds a warm, dry bed through winter. He will be doubly paid, first in the comfort and thrift of his stock, and again in increased crops from the additional supply of manure.

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WINTERING CALVES.

Eds. Cultivator—Every year I have four or five calves to winter, and every year I have to make "a talk" about it in some one of my agricultural papers. You once told my story for me (Co. Gent., Jan. 14, '58;) this time I shall try to tell it for myself, though I don't expect to do it any better, but I hope I have learned something since that time.

There are too many farmers who think it too much trouble to give calves any extra attention, but let them "take *their chance*" with the other stock through the winter. This proves a very poor chance, to my notion, for farmers who will treat calves so negligently will take very little care for the comfort of any tenant of their barn-yard. Calves, I have thought, which "take their chances," are of the same breed with those which furnish crows with bait and tanners with kip-skins in spring-time. If they survive the winter, it takes them all summer to get ready to grow again—then, if tough enough, they will stand another winter and take their place with the raw-boned, poor-milker cows, or lank, unruly steers, which are the pests of our highways and the disgrace of our stock husbandry.

A trifling amount of attention will produce a very different result. There is no need that calves stop growing in winter, nor need they be fed expensively to keep them in good thrift.

My calves have, as their winter quarters, a stable or room in the barn, about twelve feet square, with a manger along one side of it, next the barn-floor. This manger holds all I put into it, until the calves have eaten it, or I take it out—hence there is no waste. The front has V shaped openings for them to put their heads through, of a size appropriate to calves. The bottom of the manger is about six inches above the floor—a board slants to the back of the manger from about one foot from the front, so that the feed will slide forward within their reach. The front openings come within six inches of the manger bottom and extend up nearly three feet, and are about twenty inches wide at the top.

Nothing in the fodder line that I ever put before a calf, seems to "take" better than good, early cut, and well, but not over-cured clover hay. They will do well on it without anything else, but will do better with an occasional feeding of apples, pumpkins or roots, cut fine and well salted, "just for a change"—they then return to hay with a renewed appetite, and evince by their playfulness that they "feel first-rate," and by their looks, that they are thriving and growing. I like to have my calves and other stock with coats as sleek and shiny in winter as in summer, and with comfortable shelter and care, it is not difficult to secure this satisfactory appearance.

This year hay is rather scarce with me, but my calves shall not be starved down if there is any virtue in corn meal and cut straw to prevent it. So far they take hold of barley straw with good relish; pumpkins do not seem to come amiss, and a "nubbin" of soft corn occasionally seems a sweet morsel. Why cannot they make their nightly meal of straw, with a few ears of corn to give "heart" to their evening's rumination? I have seen it somewhere stated that corn fed to cattle at night would be as well digested as though ground into meal, being fully chewed in "the cud" before morning.

To thrive, calves must have water at least twice a day, and if they can have it close at hand, and whenever they like, all the better. The best I can do, is to water them night and morning, letting them take a little excursion of some six or eight rods to get their drink. It seems "tough" to them, no doubt, to leave their warm stables on a blustering day for a drink of cold water, and I should like to be able to build a great cistern to hold the water from the barn-roof, so that I could pump it up right before them and all my stock, three or four times a day at least.

Calves may be stabled and fed and watered, and yet suffer from want of cleanliness, and a good bed of litter to lie upon. I have always given the latter, and cleaned the stable three or four times a week, but this winter I shall clean out every day, and give all the bedding I can spare for them. No, I don't doubt but some will do better for their calves, but many will do worse—so it may do some good to give my reminder for those who need its promptings. Perhaps some brother farmer can give me some valuable hints on the subject, if they would only take up the pen and do it. Farmer B.

ECONOMY IN FEEDING STOCK IN WINTER.

Of late years, much has been said and written (and for the main part justly too, perhaps,) upon the economy of cutting or steaming food for cattle in the winter; a course which is doubtless under certain circumstances and in some localities, highly to be recommended. But that it should be universally followed I cannot bring myself yet to conclude. One objection to this course is the great amount of labor reqired to cut the food for a large stock of cattle, through a winter of from four and a-half to five and a-half months. And for one I cannot see what advantage it possibly can be, if my stock both consume the food I give them without wasting, and well digest it, as they probably would if kept wholly on good bright hay.

I am aware, in advancing this theory, I am conflicting somewhat with our modern teachers in agriculture, who advise us to feed nothing without being prepared by the knife or otherwise.

And while upon this subject of stock-feeding, and as the present is the proper season for rehearsing such matters, allow me just to say that the common opinion that a stock of cattle cannot be carried through the winter without a large stock of hay—equal usually to two tons per cow, and about double that quantity for a bullock—is in my view likewise preposterous. Or in other words that hay, and hay only, is what we must have for stock-feeding in the winter months.

Suppose we just look into this matter, and "calculate," Yankee-like, as you perceive I am from a Yankee State. Farmer A. has a stock of ten cows to winter. For this purpose he must have twenty tons of good hay, taken from as many acres probably—as one ton per acre is likely a full average for our hay crop.

Now there is Farmer B. his neighbor, who believes and practices a different doctrine. He has a like number of cows, and "calculates" to carry them through on his 800 bushels of roots, taken from a single acre, (either carrots, bagas, or mangolds,) and his ten tons of choice corn fodder, raised from two acres—and I will venture the assertion that Farmer B.'s cows will give more milk and look smoother in the spring than his neighbor's, which have been fed solely on dry hay.

Now, Messrs. Editors, what say you? Is there really anything *in* tkis theory, or is it all theory and moonshine? If I did not dislike to be personal, I would just give you some statistics in support of my method. And I think it becomes some of the farmers of Western New-York to look into this matter the present season, when hay is already selling in some localities for twenty dollars per ton, and just see if there is not really some way to keep stock cheaper than feeding them wholly on hay. Probably it would be economy to feed even a proportion of meal when hay commands a price approaching one cent per pound, and meal can be had for one and a-half or two cents.

All I ask is for intelligent thinking men to look into and examine the matter, and not think that there is only just one way to do here, i. e., the very thing they have *always* done, and their ancestors before them, but to recollect that the present is truly an age of progression, and he who fails from lack of confidence, either in his own energies or in the new methods constantly being brought forward, from venturing into some of the *new-fangled theories*, as he may in derision call them, must just be content to be a laggard in his age. WM. J. PETTEE.

Salisbury, Conn.

WINTERING STOCK ON STRAW AND CORN-STALKS.

In a very sensible article on stock feeding, WM. J. PETTEE suggests that there are other ways of keeping cattle through the winter, besides feeding them on *hay*. It may, perhaps, be news to him and other New-England stock-growers, to learn that many "Farmers of Western New-York" have been for years in the habit of wintering their cattle with *little or no hay at all*. Last winter, I kept through fourteen head of cattle and two horses, without a mouthful of hay, except a little to my cows about the time of their dropping their calves in spring. They went into winter in good condition, (which is very essential,) and were fed on *corn-stalks* and *straw*. Towards spring a few ears of corn, not to exceed three each per day, were given. The cows, about calving time, were messed with a few potatoes and a little barley meal, and shorts mixed in equal quantities. My stock all came through in first rate condition.

This winter I am feeding the same, with the addition of a mess of carrots each day.

A great many cattle in Western New York will be wintered on *straw alone*, with perhaps a few potatoes and a little mill feed.

What Mr. PETTEE says about the economy of feeding meal as compared with hay at the present high prices, is undoubtedly true. I certainly would prefer *straw* and *meal*, to *hay alone*. But add to these, carrots, turnips, or potatoes, and you have a combination that will keep your stock in a thriving, and if you please, a *fattening* condition.

If a man has a power straw and stalk-cutter, I think it would pay to cut his fodder. But it is a great mistake to suppose that cattle will not eat straw without cutting. If stock are tied up and fed in mangers, they will eat any kind of forage *cleaner* than if fed on the ground. The reason, I suppose, is mainly that it is not trodden under foot, and the animal being confined in one place, he is not ranging about seeking for something more palatable.

It is very common here to keep sheep through the winter on straw, with a small allowance of corn, beans, or roots. But be the feed what it may, shelter from the cold winds and storms from early autumn to late spring, is all important. If animals can have that, they will thrive on pretty short allowance. B. *Batavia.*

HOW SHALL WE SAVE FODDER.

The question has been asked more frequently and more earnestly during the present extraordinary scarcity, than for many past years. We hope to answer it in a way that may afford some valuable suggestions.

First—It is important that no fodder be *wasted*. It often happens with many that hay is scattered about feeding-yards, and trodden under foot by animals. It is not, perhaps, wholly lost, for it becomes converted to manure, but at the present time it is a rather prodigal mode of manufacture, and it would be decidedly more economical to pass this material first through the animal. To prevent this waste, suitable racks and boxes should be amply provided, and they will, in a very short time, pay their cost. Several good modes of constructing them will be found in past numbers of the Illustrated Annual Register.

Secondly—Use for food all the *straw* that can be spared. If well stacked and preserved, as nearly the whole straw crop has been the present season, it will be eaten freely, especially if a slight sprinkling of brine be added, or if cut short and mixed with meal. "But we want straw for littering our stables!" True—it is important that animals should be comfortably bedded; and it often happens where this is omitted, that more is lost by cold and discomfort, than is gained by feeding the straw. There is, however, a substitute which many farmers may still procure in the form of *forest leaves*. These constitute an admirable material for bedding animals, being softer as well as warmer than straw. During the open weather which frequently prevails in the early part of winter, they may be secured in large quantities. Select those places in the woods where the winds have swept masses together, as in hollows or along the side of fences. They may be thrown into a wagon provided with a large box, by means of a two-bushel basket, and many loads drawn in a single day.

Thirdly—Make the most of cornstalks. As commonly fed, more than half their value is wasted. The leaves are stripped off by cattle, and the solid stalks, which constitute the greatest portion, are trodden under foot. Every part should be eaten; and by doing so, one acre's product will go farther than two acres with the common wasteful mode. They must be cut fine by means of hore power.—Hay cutters, which chop in pieces an inch long, will not answer. The fourth of an inch is quite long enough.—One farmer of our acquaintance, who kept a four-horse power at his barn, has made a large saving by cutting all his cattle fodder in this way. The machine was set so as to cut very short, and the hardest stalks were reduced to a state like fine chaff; and all was eaten. Two or three hours with the machine would cut enough to last his head of thirty cattle a week. This mode of treating stalks we have found absolutely necessary in feeding the Chinese sugar cane in winter, when it becomes so hard that cattle cannot grind it. We have found great advantage in preparing it by the use of Hickok's cutter and crusher, which cuts at first half an inch long, and afterwards crushes or grinds the cut material. It would be better if cut shorter. Two-horse power will drive it with great rapidity.

Fourthly—A great saving may be effected by shelter and warmth. Cattle exposed to winds and storms must either eat large quantities to maintain animal heat alone, or else inevitably waste in flesh. Comfortable sheds, (if only temporary,) well littered, and warm stables, will save tons of fodder in a winter on every large farm, and hundreds of dollars such a season for high prices as the present one.

COOKING FOOD FOR HOGS.

A correspondent who signs himself "Massachusetts," and "farms in a small way," wishes some information relative to the best method of cooking grain for fattening hogs. He keeps but four at the present time, the food of which he cooks in a 60 gallon kettle, well set in brick, a cast iron top being placed on the brick work in which the kettle sets. But he still finds that for the four hogs, he has to cook food at least three times a week, requiring two to three hours each time, and quite a quantity of wood, which is four to six dollars per cord. He is not satisfied with this arrangement, and proposes an upright tubular steam boiler, the size of half a barrel, with the necessary pipes, cocks, &c., to convey steam to a vat for cooking the meal. He remarks that such is "the vast difference in the grain when his hogs are fed with boiled, over unboiled food," that he shall keep on with his present arrangement until he finds something better. Can any of our correspondents speak from experience in this matter?[*]

We take it for granted that the meal must be first made wet before the steam can act upon it usefully. We would like to know the amount of saving effected by a well made steamer over the best arranged kettle for boiling, with a cover, to retain as much as possible the heat of the steam. A great waste of fuel results from simply placing a kettle over a fire, the flame striking over the surface in a loose irregular manner. If, on the contrary, the brick work is so built that the flame from the small fire below is spread out thinly over the whole broad surface of the kettle, by leaving a space between the kettle and the brick, over the whole surface, only an inch or an inch and a half thick, so that the heat shall be economized as in Mott's Agricultural Furnace, a very little fuel will heat or boil a large measure of water.

There is a singular diversity of opinion on the subject of cooking corn meal for hogs. A careful and very successful farmer once assured us that his corn yielded about two and a half to three times as much pork with the meal ground and cooked, as fed in the ear. What relative part was due to the grinding and cooking respectively, he had not determined. Other farmers have placed the result far lower, and assert that it does not nearly double the value of the grain. We want something more careful and more frequently repeated under varying influences to settle the question.

In preparing ground food by cooking or otherwise, much dilution with water is very undesirable. Large, compact, excellent pork can be made only by feeding the animals on concentrated food. One of the most successful pork raisers on a small scale, feeds his spring pigs on sour milk through the season, and frequently by winter has animals weighing between three and four hundred pounds; but he is especially careful not to allow any slop to be thrown into the sour milk, or in any other way to dilute it. Hogs fed on dry *ground* meal, are observed to be of compact handsome form; while such as get abundant *slops* with a small portion of meal mixed through it, have large bellies and slenderer flesh. We believe this consideration has been too much overlooked in feeding, and hope these desultory hints will call attention to it.

FEEDING SHEEP—LOSS OF WOOL IN SPRING.

We recently remarked at some length on the management of sheep in fall and early winter, but have since come across an additional hint in the following statement credited to the *Michigan Farmer*, which, if true, is worth placing before our readers. Will some of our sheep-men give us their views upon the question. We have noticed that starved sheep were apt to lose their wool in spring, but have had no experience with such in our own flock:

> "There is no season of the year when sheep are more liable to lose nearly all they have gained, than November and December, and if they do, there is an end to the hopes of a crop of wool; for the want of food has the effect of stopping the growth of the wool, and the moment the growth is stopped, the end of the fibre is completed, a change takes place, it becomes dead, in a manner analogous to the stem of ripe fruit, and a renewal of good feed after these months, and after the growth of the wool has been once stopped only prepares the skin to send forth a new growth, that pushes off the old fleece, and causes it to be lost before shearing time."

STORING CABBAGE FOR WINTER USE.

"Cabbages are variously stored; some prefer setting the head downward and the root up, and covering partially with dry soil. Others keep in the cellar, which must be well aired." So says a writer in Co. Gent. of Oct. 6th.—In the autumn of 1857, I packed a barrel and a Havana sugar-box full of cabbage heads and white moss, and then placed them in a warm cellar. The cabbages kept sound and good into March, when some of them began to decay; however, a portion of them kept well into late in April.

Last autumn I again packed my cabbages in moss, such as is used by nurserymen in packing trees, &c. These were kept in my barn until partially frozen, and then the box and barrels were covered with straw, and kept in a slightly frozen state till into April. Any time when wanted for use they were come-at-able, and by immersing the heads in a bucket of water, the frost would be entirely removed in course of an hour or two, and the cabbage were fresh and crisp as when packed. I find this a far preferable way of keeping cabbages to that of setting them out in my warm, damp cellar, where they are liable to decay, and give off a very offensive odor. If buried head downwards out-doors, they cannot be conveniently got at till spring. L. B.

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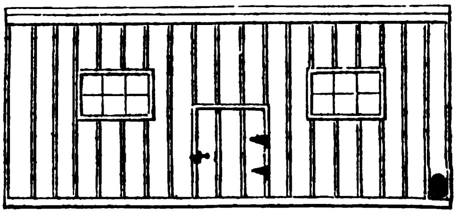
[*] Our correspondent will find a cheap steamer described in the Illustrated Register for 1858, p. 115.

The Poulterer's Companion.



CHEAP POULTRY HOUSE.

The above rough sketch is intended to represent the front elevation of a *Poultry House* I have just erected for the accommodation of one hundred fowls. The dimensions are as follows, to wit: Twenty-four feet long by twelve wide—9¼ high in front, and 6¼ in rear, to afford sufficient slope of roof to easily shed water. Architects would call it a lean-to, if attached to a dwelling or other building. The material is pine, inch stuff, batoned all around, the boards being put perpendicularly, and fastened to a plate and sill of 2 by 3 scantling, which runs across front, rear and both ends. The roof is made of inch boards a foot wide, the cracks being covered with thin sheathing 6 inches in width, and is supported in the center by a 2 by 3 scantling, the entire length of the house. In the front are two windows hung on moveable butts, and open in—door in the center, and a hole for fowls at the right hand corner, with slide inside to shut at night.

The house is divided into three apartments of 8 feet each—the center being the feeding room, into which you enter as you open the door. This room has a floor, and contains a box 24 by 18 inches, and 5 inches deep, filled with slacked lime—another filled with sand—another filled with pounded oyster shells—also a feeding hopper for grain, 8 feet long, two feet wide, and two feet high, with two fronts, so that fowls may eat from both sides at the same time—capacity about three bushels. Both faces or sides are covered with slats three inches apart, so as to prevent fowls from getting in with their feet. This hopper is filled as often as consumed, so that the fowls can have access to food at all times. Another box, covered with lath, (an old starch box I use,) is used for cooked vegetables and meat. Last comes the old-fashioned barrel fountain, which furnishes constant supply of water, *clean*, because the basin under the barrel, into which the tube extends is too small to allow the fowls to put in their feet. This list embraces nearly all the furniture of the feeding room.

The right end of the house of 8 feet, is devoted to the sleeping or roosting apartment. My roosts are now of oak poles, (shall be sassafras soon as I can get them from St. Louis,) and are placed about six feet from the ground, at right angles to each other, about 16 inches apart, and nailed together—giving more roosting room in the same space than roosts placed across a room but one way. The fowls gain the roosts by wide ladders. This room has a ventilator in the roof and in the end of the building.

The left end of the house of 8 feet, is separated from the rest of the building by a partition and door, and contains three tiers of nests, fixed around the sides of the room. Some are 18 inches square, while those upon the floor tier are 20 inches square. A board six inches wide, runs in front of all the nests, and on a level with this board, a 6 inch ledge runs around likewise, so that biddy may make a choice of nests. In the front of the nests I have nailed up a few cornstalks for concealment the more easily. The upper tier of nests is covered with a slanting roof, which will prevent fowls from stealing a quiet roosting place. This room has a ventilator in roof and rear.—I put up permanent nests, because it was the easiest and cheapest way, and scalding water and lime-wash will keep them perfectly free from insects of all kinds.

I intend another year, to adopt the pure breed system, and cultivate one kind of breed exclusively. I have now eighty fowls of various breeds, embracing Brahmas, Shanghais. Game, Creeper, Top-knot, and Grades, besides Aylesbury and Rouen and Common Ducks, Top-knot Ducks, Common Geese and Turkeys, and African Geese. My poultry yard is about 50 feet by 40 feet. The house is on west side next the cow-house. A tight board fence, 7 feet high, on west and north sides, and lath fence same height on east and south. In front of my house there is a common containing some eighty acres, which makes a capital pasture for my cows and *geese*. W. A.

Davenport, Iowa.

The Dairy Department.

FLINT'S "MILCH COWS & DAIRY FARMING."

Winter Feed of Cows.

Messrs. Eds.—In a former letter on "Butter-Making in Winter," I proposed to remark further on various interesting points brought out in the work named above, and will now proceed to do so. I have no misgivings as to the value of my text, but must confess to some fears in regard to my comments thereon.

The chapter on "Feeding and Management," contains many valuable suggestions. The anecdote of the German farmer shows clearly the importance of *feeding well*, in order to make dairying profitable. A Swiss dairyman bought the milk of his cows at a fixed price my measure, the German furnishing ample feed, but leaving their entire care to the dairyman. He soon had to sell one-half his cows, he says, "because the Swiss required nearly double the quantity of fodder which the cows had previously had"—more in fact than the farm was able to supply. He had formerly fed them better than usual; but the increased amount now consumed astonished him—as also did the result. He says, "The quantity of milk kept increasing, and it reached the highest point when the cows attained the condition of the fat kine of Pharaoh's dream. The quantity of milk became double, triple, and even quadruple, what it had been before—a hundred pounds of hay produced three times more milk than it had produced with my old mode of feeding."

The dairyman's motto, "*keep the cows constantly in good condition*," is truly "the great secret of success."—Owing to the better quality of fodder, and greater care in feeding this winter, our cows have kept in as good condition as during the summer, and the falling off in the product of butter has been much less than usual with the advance of winter. Butter-making at this season has not been a special object with me, but I have wintered cows, and experimented a little on the subject, and I find that cows fed fully and regularly with frequent changes of food, and comfortably sheltered, will give milk as long as is desirable, taking the spring's calf and next summer's milk product into consideration.

"In winter," says our author, "the best food for cows in milk, will be good sweet meadow hay, a part of which should be cut and moistened with water, as all inferior hay or straw should be, with an addition of root-crops—such as turnips, carrots, parsnips, potatoes, mangold wurtzel, with shorts, oil-cake, Indian meal or bean meal. * * Hay cut and thoroughly moistened, becomes more succulent and nutritious, and partakes more of the nature of green grass."

Good hay, early cut and well cured, *is* no doubt "the best food for cows in milk," and roots "cannot be too highly recommended, *especially to those who desire to obtain the largest quantity;*" but for *quality*, give me the hay and shorts, and roots enough for three feedings a week, and I ask nothing better, nor will I promise to use the hay cutter. As to "thoroughly moistened" hay, why is it that hay thoroughly moistened by a shower, is refused by stock until it again becomes dry, or they are starved into eating it? A slight wetting, when one mixes meal with cut hay or straw, is beneficial, and indeed requisite to their consuming the whole.

The concluding directions are worth copying: "Feed sweet and nutritious food therefore, regularly, frequently, and in small quantities, and change it often, and the best results may be confidently expected. If the cows are not in milk, but are to come in in the spring, the difference in feeding should be rather in the quantity than in the quality, if the highest yield is to be expected from them the coming season. * * The main point is to keep the animal in a healthy, thriving condition, and not to suffer her to fail in flesh; and with this object, some change and variety in food is highly important."

Prof. Flint says nothing of corn-stalks as a winter food for cows, but those who have fed them in connection with hay and roots, know how to estimate their value. In common with many others, I have observed that cows give more milk, and the butter retains its yellow color much later, when corn-fodder is fed, and comes sooner in churning, and is of a better quality. No doubt this arises from the sweetness of the corn-stalk. Roots, if fed freely, make the milk watery and thin, and hay not of the best kind, causes a decrease in quantity and quality. With good hay, corn-stalks well cured and saved, roots, apples, and wheat-shorts, one can give that "change and variety" so essential to keep the cow in a healthy, thriving condition. A neighbor, keeping but one cow, and feeding corn-stalks and shorts, is now making ten pounds of butter per week—more than some make from five cows under common treatment, at this season.

If this proves printworthy, I shall offer some remarks on other matters contained in the work before us—as yet, I have touched but a single chapter. A Young Farmer.

The Bee-Keeper's Department.

Degeneration of Bees.

Articles occasionally appear in the agricultural journals, upon the "Degeneration of Bees." Some writers attribute this want of continued success to breeding in-and-in, and advise changing stocks with neighbors. Others state that swarms from old stocks have become so dwarfed that they lack strength, energy, and numbers to secure sufficient store to maintain themselves, and consequently must perish, and also affirm that this degeneration goes on with almost mathematical regularity from generation to generation.

An examination of the natural history of the bee makes one receive the foregoing with much doubt.

First—As to breeding in-and-in. In most thinly settled parts of the country, and where few bees are kept, there are generally wild bees enough to prevent, with considerable certainty, in-and-in breeding. Where many bees are kept there can be no danger of degeneration from this cause. Those persons who take enough interest in their bees to change stocks with neighbors to improve the breed, will undoubtedly give their bees all the attention necessary to success, and they would, I think, succeed just as well without troubling themselves about ill effects of in-and-in breeding.

Secondly—Dwarfed bees can only be produced from old brood comb, the cells being smaller from the number of cocoons contained. However much dwarfed a new swarm from an old stock may be, unless they, in building new comb, build it of reduced dimensions, the offspring of their queen will be full size. I have never seen it mentioned that any one ever saw a *new comb of reduced sized cells, or a dwarfed queen.* Dwarfed queens are not produced. It is almost positively certain that only one queen is ever produced from a cell. After the queen is hatched the cell is almost entirely destroyed. After the swarming season, only a trace of queen's cells can be found, so that we can reasonably conclude that the young queens, hatched the following season, emerge from newly formed cells. The queen is impregnated out of the hive, so that dwarfed drones from her hive are not likely to injure the race. Superior strength probably rules with bees as much as with animals. We may conclude that dwarfage comes entirely from very old hives, and that with the death of the bees that have swarmed from an old stock, ends the dwarfs in the new hive.

The treatment of weak swarms, whether from old dwarfed or young stocks, has often been given in the Co. Gent. and Cultivator, and it is an important question in bee culture. A weak colony made strong by proper management, is just as good as a colony originally strong. R. P.

Inquiries and Answers.

Drain Tile.—I wish to say something to you on the subject of draining by round tile, &c. The agricultural works have much to say about tile draining, round tile, and all this thing, but never have enlightened us at all as to how lateral surface drainage gets into the broad side of a tubular pipe of 2 inches or any other diameter. I can easily see how a tubular pipe could drain a pond, or send water from a higher to a lower level; but how surface drainage or water can get laterally into a tubular pipe of one-quarter to one-half a mile long, sufficiently to drain the land on each side of the pipe, is more than we "suckers" are able at present to see. I hope you will be good enough to enlighten us on this subject through the Co. Gentleman. Your contributors and correspondents in general are not explicit enough, often leaving us in the dark on the most essential points. A Subscriber.—*Alton, Illinois.* [The water finds its way into the crevices between the separate tiles, and this far more rapidly and completely than can be conceived before trial. In order to prevent the earth also from washing in, it is often necessary to place straw, sods, &c., over the ends of the tile; and hence it has been sometimes remarked that the more you try to *keep the water out*, the surer it will be to come in freely, and your drain to work well and permanently.]

Fruits for Market.—I am somewhat engaged in the fruit business. Will you please inform me of a few of the best sorts of apples, pears, and grapes for market use, and best adapted to our locality, between the Seneca and Cayuga lakes in Ovid? As we have the State Ag. College located in this town, and the State premium farm of 1856, we ought to be improving some. G. D. *Sheldrake, N. Y.* [We can best answer the inquiry in relation to apples by quoting the vote taken on this subject at the Fruit Growers' meeting at Rochester last winter. The following is the list, those being placed first, which received the largest vote: Baldwin, Rhode Island Greening, Roxbury Russet, Tompkins County King, Northern Spy, Twenty Ounce, Tallman Sweeting, Fall Pippin, Esopus Spitzenberg, Lowell, Golden Russet, Red Astrachan, &c. The Baldwin received double the vote of the Greening; the Greening double the Roxbury Russet; the Roxbury Russet double the Northern Spy; the Northern Spy double the Fall Pippin, &c. The best pears for market are Angouleme, Louise Bonne of Jersey, Beurre d'Anjou, Winkfield and Easter Beurre, *on quince;* and Bartlett, Flemish Beauty, Sheldon, Seckel and Lawrence, *on pear.* The Virgalieu would stand first, but for its liability to crack. The Isabella, so far is the best market Grape.—Time only will prove the value of the Concord, Delaware and Diana—grapes of high promise.]

Raisins and Grapes.—Can raisins be made from any of our native grapes, and if so, of what variety? Also please state exactly how it is to be done in detail. Where can I procure a two-year-old vine (not forced) of the Anna, Clara and Powell? An Amateur. *Philadelphia.* [Attempts have been made to manufacture raisins of American grapes, but have not as yet been very successful. The Clara and Anna grapes may be had of S. Miller of Lebanon, Lebanon Co., Pa., but we are unable to say where the Powell can be obtained—perhaps of C. P. Bissell & Co. of Rochester, or of Dr. Grant of Fishkill, N. Y.]

Drilling Rocks.—Wanted, a *labor-saving* machine for boring or drilling rocks for blasting. Any inventor or dealer having such for sale, that has been *well tried and approved*, may find a purchaser by furnishing his address to this paper. D. S.

Farm Mill.—I would make the following inquiry respecting a farm mill for grinding corn in the ear, and other grain for feed, for farm use—said mill to be run with one of Emery & Brothers' two-horse powers—and what amount of work it will perform, and price of mill all ready for use. J. P. S. [Perhaps some of our readers can furnish us the results of their own experience in answer to the above.]

Cookery and Domestic Economy.

Buckwheat Bread.

Who loves not buckwheat pancakes, and to how many in a failure of the wheat crop, is buckwheat the staff of life? and to how many more might it be if the fact were generally known, that a most palatable bread can be made from it.

The bread is as good as the pancakes—(we say better) —far less trouble to prepare, and has no burnt grease about it to make it unwholesome.

To Make Buckwheat Bread or Johnny Cake.—To one quart buttermilk, add a teaspoonful of soda, and flour enough to make a thin batter—put in an egg if convenient, and bake in quick oven. *Try it!* F. K. Phoenix.

Johnny Cake.

A recipe for those who, like ourselves, prefer Johnny-cake without the addition of eggs and flour. We make our pumpkin pies without those condiments, substituting a cup or two of cream.

1¼ cups sweet cream.
5 cups butter-milk.
1 small tablespoonful granulated or other good sugar.
2 small teaspoonfuls saleratus and a little salt.

Add corn-meal to make a batter as stiff as can be conveniently stirred with a spoon. It should be briskly stirred, turned into a well buttered dripping-pan, and baked in a quick but not too hot oven. M. *Racine, Wis.*

Cough Mixture.

I will give you an excellent recipe for coughs and colds, if you think proper to insert it in your paper. It has been tried for several years, and I might say it is almost an infallible remedy.

1 tea-spoonful of Camphor, (liquid,)
1 " Lobelia, "
1 " Laudanum, "
2 table-spoonfuls of Honey or Loaf Sugar.

Dose—1 tea-spoonful night and morning, or when the fit of coughing is very severe. Mrs. J P.

Ice Cream.

Take one quart of new milk, one pint of thick sweet cream, 3 eggs—beat thoroughly—2 tablespoons of extract of any kind you prefer—"vanilla," "lemon," or any other —some use the vanilla bean. Have the sugar powdered; add the sugar to the mixture in such a proportion as will make it sickishly sweet, as a part of it freezes out. Some put in a small quantity of arrow root or corn starch, but that is unnecessary, if you have good cream and plenty of eggs. Put the whole in a preserving kettle, with a vessel of hot water under to prevent it having a burnt taste; let it come to a scalding heat; then strain it into a freezer.—Have ice pounded, (snow is better;) put a quart of coarse salt with two of snow or ice. Mix the snow and salt well together and press around the freezer. Stir with a wooden spoon until it commences freezing around the sides; then cover, and only stir it occasionally. Put a hot towel around it to take it out; dip the towel in hot water and it will slip from the freezer easily. I hope I have made it plain for "Jennie." L.

Frosting for Cake.

Take the whites of eggs, perfectly free from the yolk, and beat it up till it will stand in shape or pile. Prepare the sugar by pounding and sifting through a fine wire sieve; add a tablespoon of arrow root or corn starch to the white of each egg. Add the starch and as much sugar as it will receive, not allowing it to run at all; put on the cake while warm, not hot. Spread it with a knife. Set it back in the oven to dry while the oven is only warm. If this rule is followed, you can ornament the cake in any manner you please, as the iceing is stiff enough to retain its form. A Reader of the Cultivator.

THE CULTIVATOR.

ALBANY, N. Y., JANUARY, 1860.

American Farmers and Agricultural Reading.—About a year ago a contemporary of ours, in writing of American Farmers, said that they were the most intelligent and enterprising of any on the globe. But our correspondent, John Johnston, whom no one will accuse of having any "book-notions," or of running off into extravagant impracticabilities, wrote to us very soon, that this was too much "like a minister of the Gospel, preaching to please sinners in order to fill the pews."

We had it in mind, at this time to say that, although it is essential to progress to maintain a constant "agitation," as it is now-a-days called, of the means which are to bring it about,—we doubt if the farmers of any other country know better what their neighbors are doing in the way of improvement, or, as a whole, read more in connection with their business, than do the farmers of the United States.—Then came to our recollection the warning voice which we have quoted above, and we turned back to the letter of our correspondent with the conclusion to think again before being betrayed into any apparent bowing down at the shrine of mammon.

"I firmly believe," continued our friend, "that no man or class of men, will cease from doing wrong and learn to do right, until they are convinced they are wrong; and my preaching rest, dung, and lime and plaster, for thirty years or nearly, is thrown aside at one sweep, when agricultural editors tell the farmers they are so intelligent and enterprising."

We must confess that whenever a comparison in any respect between the great body engaged in agriculture here and the corresponding class abroad, tempts us into a spirit of complacency, this thought will arise, "how small the number really is here—in proportion to the whole—who read with any attention the agricultural journals published for their benefit, who regard the improvements made by others with any effort to adapt them to their own wants,—least of all, who endeavor by careful thought and practical trials, to advance a step beyond their fellows, at the same time by frequent communication with them, to lend a helping hand, as John Johnston has so often done, toward the general good!"

But we are of that conservative school which yet adheres to the doctrine that all progression, to be real and solid, must be tolerably slow. And we think we can distinctly mark the evidences that improvement of this kind has begun and is actually going on among our farmers. We work the more earnestly and with the better cheer, on this account, to diffuse a knowledge of the necessity of this improvement, to discuss the measures by which it may best be secured, constantly to draw more and more into the ranks of those who will labor with us.

It was the remark of a careful observer and received authority on Agricultural matters—the late Philip Pusey of the Royal Agricultural Society of England, that "books will not teach farming, but," added he, "if they describe the practices of the best farmers, they will make men think, and show where to learn it." More truth was never put into so few words, and James Caird was right in selecting it for the motto of his survey of English agriculture; we could have no better, perhaps, in this periodical survey we are making, with the pens of our associates and correspondents, of the Agricultural capacities and wants of every part of our land.

— The one resource on which we depend in carrying out the effort, is the co-oporation of those who might so much assist us. Let them not think the cry too frequent to "fill the pews;" we shall all be the warmer and more earnest *if they are filled*, and we shall have the more among us who are able, and becoming able, to "speak in meeting," with the voice, and personally describe the operations of "the best farmess." With our New Year's greeting to every reader, we shall put therefore the question in a frank and hearty way, "What are you going to do in the month or two to come, to help us along?—Haven't you one or two, or a score, or more of neighbors to bring to our mutual assistance? Have you not been doing something on your farm during the past season, the narrative of which, written out for our columns these long winter evenings, would be sure to interest or instruct some part or perhaps the whole of our already extensive company?"

—"Messrs. Editors," writes a subscriber from Western New York under date of Dec. 9th, "I have received your paper (THE COUNTRY GENTLEMAN) for several years, and have made money by so doing; and I am endeavoring to show our farmers that the mind, upon which all these facts and suggestions are bestowed at a loss when only the price of subscription is at stake, must be a barren mind indeed."

[See "SPECIAL NOTICES" on Last Page.]

◆

LECTURES NEXT MONTH AT NEW-HAVEN.—In our November number we referred to the project, then under way, to devote the month of February to a series of eighty or a hundred lectures on Agricultural and Horticultural topics. The price for the series is only $10, and it will, undoubtedly, be the best opportunity for discussion and the acquisition of useful information ever offered to our farmers and their sons. We remark with gratification, the expressions of approval already elicited for the design wherever it has been made known; neither those who go to teach, nor those who go to be taught, are likely to come away without receiving some benefit from mutual contact as well as from the knowledge communicated. The following is a brief schedule of the general subjects, with the names of those who have undertaken their treatment:

FIRST WEEK—SCIENCE IN ITS RELATIONS TO AGRICULTURE.

Chemistry,	Prof. S. W. JOHNSON.
Meteorology,	Prof. B. SILLIMAN, Jr.
Entomology,	Dr. ASA FITCH.
Vegetable Physiology,	DANIEL C. EATON, Esq.

SECOND WEEK—HORTICULTURE.

Pomology in general,	Hon. M. P. WILDER.
Grapes,	Dr. C. W. GRANT.
Berries,	R. G. PARDEE, Esq.
Fruit Trees,	P. BARRY, Esq.
Fruits as Farm Crops,	LEWIS F. ALLEN, Esq.
Agricultural Chemistry,	Prof. S. W. JOHNSON.

THIRD WEEK—AGRICULTURE PROPER.

Drainage,	Hon. HENRY F. FRENCH.
Grasses and Irrigation,	J. STANTON GOULD, Esq.
Cereals,	JOSEPH HARRIS, Esq.
Hops, Tobacco, &c.,	Prof. WM. H. BREWER.
Cultivation of Light Soils,	LEVI BARTLETT, Esq.
English Agriculture,	LUTHER H. TUCKER, Esq
Agricultural Statistics,	Prof. JOHN A. PORTER.

FOURTH WEEK—DOMESTIC ANIMALS.

Principles of Stock Breeding,	Hon. CASSIUS M. CLAY.
Stock Breeding in U. S.,	LEWIS F. ALLEN, Esq.
Breeding for the Dairy,	CHAS. L. FLINT, Esq.
Horses,	SANFORD HOWARD, Esq.
Root Crops & Sheep Husb'ndry,	THEO. S. GOLD, Esq.
Pisciculture,	Dr. J. C. COMSTOCK.
Rural Economy,	DONA'D G. MITCHELL, Esq.

Many other experienced Agriculturists and Horticulturists, besides those included in the list of lecturers, will be present and take part in the discussions, which will form an important feature of the course.

The number of lectures on the above subjects, will average three lectures to each subject. The Course will commence Feb. 1. For a detailed programme, including subiects not above specified, applicatian may be made to Prof. JOHN A. PORTER, New Haven, Ct.

◆

LIVE STOCK FOR CALIFORNIA.—Mr. E. FRISBIE of Vallejo, sailed for California on the 5th ult., taking with him two breeding mares—one by Consternation from a Morgan mare, bought of Mr. Wm. Adams of Salina, and the other of Mr. E. H. Murdock of Port Byron—one Short-Horn and two bull calves, and pairs of Essex and Suffolk pigs, from Wm. Hurst of this city, and four Leicester sheep from the flock of Jurian Winne of Bethlehem.

◆

THE ILLUSTRATED ANNUAL REGISTER OF RURAL AFFAIRS.—Not only every farmer, but every person who has a garden, and even those who have only a rod square of ground to cultivate, should have this beautiful work. It is a wonder to us how the publishers can get up such a book for "twenty-five cents." Why it's worth a "quarter" to just look through it and see the engravings. Let me urge *every one of your subscribers* to send you twenty-five cents, and get a copy of the book, and then try and see how many they can sell. F. F.

It may be stated by way of comment upon the above, that Fifty Dollars were paid by the Publishers of the REGISTER for one article and the twenty-five drawings accompanying it, and One Hundred and Fifteen Dollars more for the Engraving of the latter—the whole occupying *only Twelve Pages!* "TUCKER'S AMERICAN REGISTER," says the London *Mark Lane Express*, is "carefully edited, nicely printed and profusely ornamented with wood engravings."

◆

THE STATE BOARD OF AGRICULTURE OF OHIO.—Extract from a letter dated Columbus, O., Dec. 12: We have just closed a harmonious session of the State Board and State Society, of three days continuance. We have concluded not to locate our Fair permanently, nor even to hold it two successive years in the same place. The new State Board consists of the following gentlemen:

ALEX. WADDLE, So. Charleston, Clark Co., President.
Hon. T. C. Jones, Delaware, Recording Secretary.
John Reber, Lancaster, Treasurer.
N. S. Townshend, Avon, Lorain County.
J. M. Trimble, Hillsboro.
J. M. Millikin, Hamilton.
D. E. Gardener, Toledo.
William De Witt Cleveland.
H. B. Perkins, Warren, Trumbull County.
C. W. Potwin, Zanesville.
J. H. Klippart, Columbus, Ohio, Corresponding Secretary

◆

WOOD & HURLBURT'S ENGINES RECEIVE A PRIZE.—At the last meeting of the Executive Committee of the State Agricultural Society, a special committee of well qualified mechanicians, of which Ira Jagger was Chairman, reported favorably of Wood & Hurlburt's portable farm engines, on exhibition at the late Fair—as performing well, with excellent furnace arrangements, rendering them, as respects danger from fire, and in all respects, good safe engines for light purposes: a Silver Medal awarded.

◆

USEFULNESS OF COAL TAR.—Every gardener should have a supply of gas tar—it has many uses. In the first place, nothing will destroy orchard caterpillars so instantly as the touch of a swab dipped in this substance—the slightest dab will finish them. In the next place it is the best preservative of wood wherever exposed to air and moisture. The inner surfaces of the boxes of barrows and hand carts, if coated with two or three applications of hot gas tar, will last indefinitely, so far as decay is concerned. The lower ends of bean poles, moveable frames, stakes for plants, trellises, &c., treated in the same way, will last a long time. It is incomparably better than paint. Care must be taken in heating it not to set it on fire, or a conflagration may be the result. The best time to apply it is when the wood is very dry, and is warmed by the summer sun, the pores or cracks being open, will absorb it effectually. This time of year, however, when there is no hot sun, the same result is attained for all small articles by warming them for some time near or under a stove.

◆

SOUTH-DOWN SHEEP FOR TEXAS.—GEORGE HARTSHORNE, Rahway, N. J., shipped last week, for Calhoun Co., Texas, 15 South-Down Bucks. This is the third shipment Mr. Hartshorne has made within the last 12 months. The sheep have done well, and are very much valued, and no doubt exists as to their value in crossing with the Mexican sheep of that section.

QUEEN'S SEEDSMEN.

PETER LAWSON & SON,

Edinburgh, 1 George IV. Bridge.

LONDON, 27 St. George St., Westminster, S. W.

On account of the numerous applications which have been made to PETER LAWSON & SON, to send their List of Seeds and Nursery Produce to the United States and Canada, they beg leave to inform the Trade in America, that they are prepared to furnish them with

Price Lists,

and to assure them that any orders they may be favored with will receive their best attention.

All Orders must be accompanied by CASH, or satisfactory references in England. Dec. 22—w&m1t.

MIAMI BLACK RASPBERRY. Unsurpassed in its merits as a Berry for Garden or Market Culture. A very superior sort. Plants supplied, in small or large quantities, at low rates.

C. B. MURRAY,
Little Miami Nurseries, Foster's Crossing,
Warren County, Ohio.
Dec. 22—m1t—weow4t.

RASPBEERY PLANTS AND SEEDLING POTATOES.

FOR SALE—10,000 HUDSON RIVER ANTWERP RASPBERRY PLANTS, at $20 per 1000—$2.50 per 100.—Also 100 barrels "STUDLEY SEEDLING POTATOES"—a very early kind, not subject to the potato rot—fall price $2 per barrel.

Address S. V. C. VAN RENSSELAER,
Claverack, Columbia Co., N. Y.
Nov. 16—w3tm3t

GREAT CURIOSITY.—Particulars sent free. Agents wanted.

SHAW & CLARK,
Biddeford, Me.
Dec. 8—w13tm6t.

FOR SALE.—The Thorough-Bred Durham Bull "OZARK," 1985, Three Years Old in October—price $150. Also 4 pair BERKSHIRE PIGS, 3 months old, 2 Boars and 2 Sows—price $8 each, boxed, &c. Address

THOS. GOULD,
Aurora, Cayuga Co., N. Y.
Dec. 22—w4tm2t.

DURHAM STOCK FOR SALE, at reduced prices. Having made arrangements to rent my farm, I will sell my Stock of Durhams, consisting of Eleven Cows, six Heifers, from four to thirty months old, and ten bulls from two months to four years old, at greatly reduced rates.

GEORGE G. LOBDELL,
Wilmington, Del.
Dec. 15—tf.

EXCELSIOR AGRICULTURAL WORKS,

Albany, N. Y.

CHARLES E. PEASE, Proprietor,

(Successor to RICHARD H. PEASE.)

Farmers and Dealers in Agricultural Machines will find it to their interest to patronize this establishment, where they can be supplied with the very best

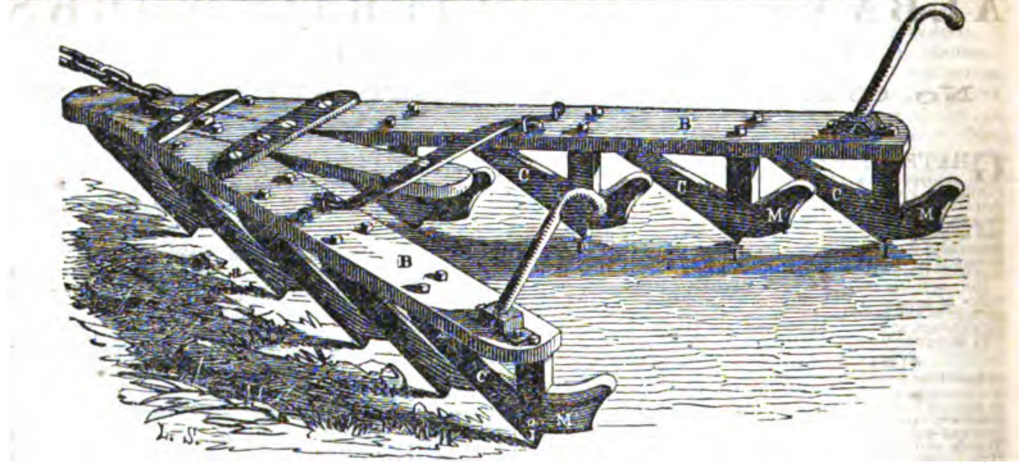
Endless Chain Horse Powers,

for one or two horses; Lever or Sweep Horse Powers; Improved Threshers and Separators and Cleaners; Circular Saw Mills for cord wood; Cross Cut Saw Mills for cross cutting lumber; Krauser's Patent and Philo's Cider Mills; Corn Shellers; Clover Hullers; Dog Powers for churning, &c., &c.; Hay Cutters, Wilson's Patent, &c.

Manufacturing none but the most approved Implements that have been thoroughly and practically tested, I am enabled to give a most liberal warranty on all my implements, knowing that they cannot but work as represented. I have just received the first premium at the NEW-YORK STATE FAIR, held here October 4 to 7th, for the best, most durable, useful and cheapest **Agricultural Machines** on exhibition. Orders will receive prompt attention, and Circulars sent gratis on application. Address

CHARLES E. PEASE,
Excelsior Ag. Works,
Albany, N. Y.
Jan. 1, 1860.

DOWNING'S FRUIT AND FRUIT TREES. Just Published, and for Sale at this Office—sent by mail, post-paid, at $1.75.



SHARES' PATENT

COULTER HARROW, PULVERIZER,

AND GRAIN COVERER.

BELOW is a Notice by J. J. THOMAS, Esq., published Editorially in the COUNTRY GENTLEMAN of April 28, 1859, of the above named machine:

"SHARES' HARROW.—We have given a full and practical trial to SHARES' HARROW, received from PEASE & EGGLESTON, of this city. It proves to be an admirable implement for its intended purpose. It completely pulverizes the surface of inverted sod, effecting this at least three times as deep as the same is performed by the common harrow. Besides this, it possesses one great advantage over the common harrow as well as over the gang plow, in that it does not tear up the sod or bring up the grass. This advantage results from the peculiar form of each tooth, which at first presses the sod down like a sled-runner—then cuts it in the direction of motion—then throws the earth sideways like the mould-board of a plow. The inventor of this tooth has shown much ingenuity in thus combining in the proper order these three offices.

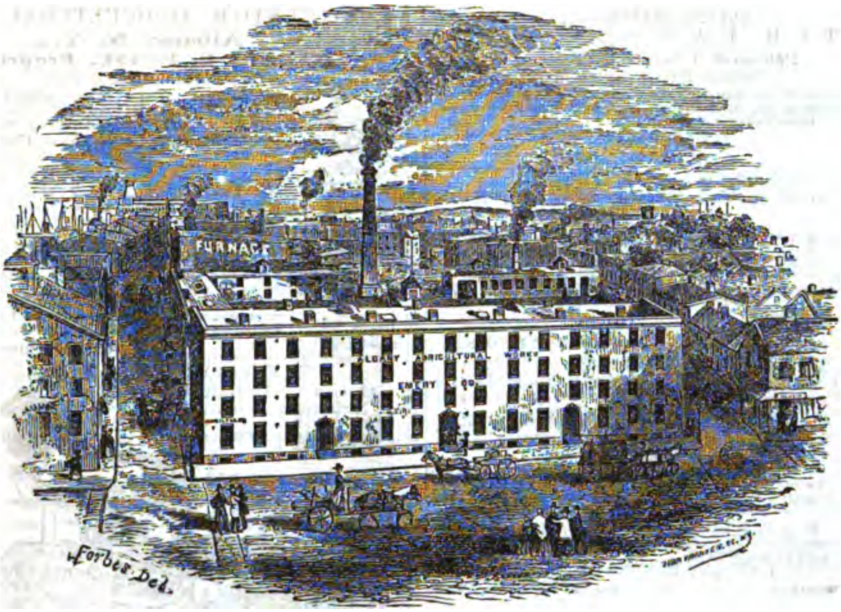
The form of the harrow is neat and perfect. Its three bars are folded snugly together for conveyance, and opened again for use, and firmly braced, with almost a single motion of the hand.

We tried this harrow side by side with a common, nearly new, and well made double square or Scoch harrow. The Shares harrow pulverized more efficiently and more than twice as deep, at twice passing, as the square one at four times.

Every man who cultivates a farm of any considerable size, especially if the soil be strong or adhesive, would certainly pay for this harrow in one year by the work it would enable him to perform. Nothing can exceed it in preparing inverted sod for corn or for any other crop. It would effect an admirable preparation for the gang plow, in turning under a coat of manure on the top of inverted sod; and it would prepare fall-plowed ground for sowing oats and barley early in spring, in an efficient manner. It is one of the best inventions of late years for the farmer."

This celebrated implement is manufactured by the subscriber. It weighs only 185 lbs., and the price is only $15, delivered on cars or boat here. Farmers and Planters south, are requested to order in time for their early spring work. Catalogues gratis. Address, for further particulars,

WM. W. EGGLESTON,
Successor to Pease & Eggleston,
Dealer in all kinds of Agricultural Implements, Albany, N. Y.



EMERY BROTHERS,

PROPRIETORS OF THE

ALBANY AGRICULTURAL WORKS,

IMPLEMENT AND SEED STORE,

No. 62 AND 64 STATE STREET, ALBANY, N. Y.

GRATEFUL for the kind and liberal patronage enjoyed for so many years from an Intelligent Agricultural Public, the Proprietors of the above works again desire to call attention to their Assortment of Machines and Implements. Believing, as they do, that their Workmanship and Materials, and the successful and satisfactory operation of the many thousands of their Machines throughout the Agricultural world, together with the liberal patronage so long enjoyed and constantly increasing, warrants them in saying that their Machines are superior to any others manufactured.

The low Prices charged for their articles, considering their intrinsic value as compared with those of other makers, render them far cheaper to the purchasers than any other Machines made for similar purposes, at whatever prices they may be sold.

To those who have used Machines from the

ALBANY AGRICULTURAL WORKS,

or have been acquainted with their value, no further recommendation is necessary; but as there are many who have neither used or seen, or perhaps known their merits, the Proprietors would say that their combined experience as manufacturers and users, together with their long and extensive trade in Agricultural Implements, &c., and their Travels and Exhibitions of their work in almost every State in the Union, with numerous trials and tests in competition with every Competing Machine of any note in the country, enable them to produce the best of its kind in every article made by them, and to keep pace with, and in many instances to lead in the improvement and introduction of labor saving machinery.

They would also state that many times more Prizes for superiority of their Machines at Public Exhibitions, have been awarded to them than to the Proprietors of any like establishment, embracing nearly

ONE HUNDRED GOLD, SILVER & BRONZE MEDALS,

various articles of Silver Plate, and more than One Thousand Dollars in money, besides Hundreds of Diplomas and awards of lesser importance, which facts alone are sufficient guaranty to the public of the value of their workmanship, as well as the execution of the Machines themselves. Notwithstanding the great variety and utility of their Machines, they have, during the past year, added several new ones to their assortment, and made valuable additions and improvements to many of their others, already celebrated for superior merit, among which may be named as new, an

IMPROVED THRESHER AND CLEANER

Combined, which is of much Simpler Construction, of greater capacity, and requiring less force to propel it than heretofore with others made by them. It combines in its structure the advantages of the CELEBRATED PITTS PATENTS, which are most generally used in all large threshers in the wheat growing States. It is far superior to any thing heretofore offered by them to the public, as their extensive use during the past harvest has demonstrated. Another is

A COTTON GIN

for Plantation use, and especially adapted for their TWO HORSE POWER, while it is readily driven by any other of equal or greater force.

This GIN is so complete in all its parts, and perfect in its mechanism, that two mules of ordinary size, upon their TWO HORSF POWER, will readily gin FIFTEEN HUNDRED TO TWO THOUSAND POUNDS OF LINT PER DAY with the FIFTY SAW GIN, and produces a lint of a superior quality when used side by side with most other kinds in use, and equal to that made with the best GINS known.

They have been thoroughly tested the past season in the GEORGIA COTTON CROP, and sustain all here claimed for them.

Another is a

POWER CORN SHELLER,

also adapted for the Two Horse Power, as well as for milling purposes on any scale, as they are capable of Shelling, with two horses, upwards of One Hundred Bushels clean corn per hour, and nearly double that amount with additional power.

They combine all the advantages of the well known SMITH'S PATENT, which is almost exclusively in use in the corn growing States, the Proprietors having concluded an arrangement with the patentee for the privilege of using so much of his patent as is necessary for making the most perfect Sheller in use.

Another is a

NEW CORN PLANTER,

combining all the valuable qualities of the ALBANY CORN and SEED PLANTER, which also was of their own invention, and which has been the acknowledged leading Corn Planter for thirteen years among the hundreds of other Machines invented and in use during that time. The improvements in this better adapt it to the great variety and conditions of soils, as well as seeds, which, in these respects, make it doubly valuable, as compared with the other, while it is more simply constructed and afforded at a less price.

Another is the

IMPROVED CLOVER GRATER AND CLEANER,

combining the well known Rasp Grating Cylinder and Concave, with many important additions and improvements in its manner of adjustment and in its operating parts, which secure a much greater capacity for work, and doing it in a more complete manner. This is believed to be the most perfect Clover Mill extant—and the large sales and the general satisfaction given by them this season has thus demonstrated their merits.

The foregoing, together with a great number of minor additions and improvements, enable the Proprietors to offer greater inducements, both in quality of their wares and terms of sale than heretofore, and they solicit a careful examination of their manufactures, and their Illuminated Catalogue of Machines, which contains descriptions, Illustrations and Prices of the leading articles manufactured by them. This Catalogue contains a large amount of useful information relating to the value and uses, as well as construction of labor saving machines, which is important to be known and understood by every Farmer, Dealer and Manufacturer, using, selling or making Agricultural Machines. The Illustrations are in the finest style of the art of Wood Engraving, and alone make a valuable collection. This Catalogue is furnished gratis, and postage pre-paid, upon the receipt of a three cent postage stamp. The Proprietors solicit Local Agents wherever none are already established, to whom liberal terms and compensation will be allowed. Address

EMERY BROTHERS, Proprietors of the
Albany Agricultural Works, Nos. 62 and 64, State St., Albany, N. Y

FRENCH NURSERY.

ANDRE LEROY'S NURSERIES AT ANGERS, FRANCE.

The proprietor of these Nurseries, the most extensive in the world, has the honor to inform his numerous friends and the public, that his Catalogue of FRUIT AND ORNAMENTAL TREES, SHRUBS, ROSES, SEEDLINGS, FRUIT STOCKS, &c., for the present season, is now ready and at their disposal. Apply as heretofore, to

F. A. BRUGUIERE, 51 Cedar-Street,
Oct. 6—woam3t—m3t. New York.

Agricultural and Horticultural Book Publishers.

THE HORTICULTURIST, AND Journal of Rural Art and Rural Taste,

Is published monthly at $2 a year, by

C. M. SAXTON, BARKER & CO., 25 PARK ROW, NEW YORK.

A complete assortment of AGRICULTURAL AND HORTICULTURAL BOOKS constantly on hand. Catalogues furnished on application. Dec. 1—weow3tm1t.

Six Hundred and Seventy-two Pages and nearly NINE HUNDRED ENGRAVINGS!

"RURAL AFFAIRS."—Under this simple and comprehensive title, the Publishers of the ANNUAL REGISTER have just completed a new edition of that work from the beginning, —embracing the Numbers from 1855 to 1860 inclusive, in Two Volumes, muslin, full gilt, fine paper, and wide margins, sold either separately or together, at One Dollar each, and furnishing a

Complete Encyclopædia in Miniature,

For every man with a Farm, a Garden or a Domestic Animal—for every Place which will grow a Flower or a Fruit Tree—for every Purchaser or Builder in the Country, and for every Household in the City, delighting in representations or looking forward with hopes of Rural Life, embracing under the head of

I. Country Dwellings,

FORTY-TWO DESIGNS for Cottages, Farm Houses, and Villas, with Plans in many instances of several floors, and including under this head alone, One Hundred and Twenty-seven Engravings.

II. Improving, Planting, and Laying out Grounds.

Several Chapters will be found on these and kindred Subjects, with many full and practical details, illustrated with no less than Ninety-one Engravings.

III. Fruit Culture.

On this Subject we have not only Directions for Cultivation, but also concise and reliable Descriptions of the most Valuable Sorts, with Lists for different parts of the Country, and One Hundred and Ninety-seven Engravings.

IV. Farms and Farm Buildings.

Under this Department we have Mr. THOMAS' admirable Prize Essay on Farm Management, Suggestions on Laying Out Farms, with Plans, and Designs for Farm Structures, including Barns, Piggeries, Poultry Houses, Smoke Houses, Cisterns, Carriage Houses, Stables, Granaries, Sheep Houses, Wagon Houses, &c., &c., and Ninety Engravings.

V. Farm Implements.

Here Descriptions more or less full, with accompanying Remarks, are given of a wide variety of Implements—especially those that are new and valuable. Eighty-eight Engravings.

VI. Domestic Animals.

The different Breeds are Illustrated, and various Recipes and Directions given for the Treatment of their Diseases. Poultry Management is here included. Forty Engravings.

VII. School Houses.

A Chapter on this Subject includes Four Designs and Eight Engravings.

VIII. Butter and Cheese Making.

A Chapter upon the Dairy and its Processes, will be found most valuable and interesting. Thirteen Engravings.

IX. Kitchen and Flower Garden.

Articles on the Management of these portions of the Homestead Grounds are Illustrated with Twenty-seven Engravings.

X. Rock Work and Rustic Structures.

Conservatories, Vineries, and Rustic Ornaments of Wood and Iron, both for Out-doors and Indoors, with Sixty-one Engravings.

XI. The Apiary.

A Chapter is contributed under this head, by the Author of the "Mysteries of Bee-Keeping,"—with Eleven Engravings.

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Probably the most concise and Complete Practical Essay ever published on this subject. Twenty-eight Engravings.

XIII. Hedges.

With Thirteen Engravings.

XIV. Farm Gates and Fences.

With Thirty Engravings.

So brief a summary is only calculated to give an imperfect idea of the general scope of the work. Over 800 Illustrations are above referred to, and there are many more in connection with various Agricultural, Horticultural, and Domestic Subjects. A Complete List of the Principal Nurseries in this Country and Europe, is given in the Second Volume.

The PURITAN RECORDER thus noticed the first volume:

"We cannot conceive of a plan of a book better adapted for utility to all the purposes of the Farmer than this. It is to him what a book of Architectural Plans is to the Builder. It paints to the eye everything with which the Farmer has to do; and there is hardly any subject of practical interest to the Farmer which is not here treated and practically illustrated."

The Volumes are sold separately, and orders for either should specify particularly whether the one wanted is the First or Second.

☞ FAVORABLE TERMS TO AGENTS. ☜

"RURAL AFFAIRS" is also particularly commended for School District and Town Libraries, as well as for Premiums to be awarded by Agricultural and Horticultural Societies.

LUTHER TUCKER & SON,
Jan. 1, 1860. Albany, N. Y

HUDSON RIVER ANTWERP RASPBERRY PLANTS, $2.50 per 100; $20 per 1000.

Lawton and Newman's Thornless Blackberry Plants, $6 per 100.

DAVID KETCHAM,
Oct. 1—mtf. Milton, Ulster Co., N. Y.

LAWTON BLACKBERRY.—To obtain the original variety for field or garden culture, address

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☞ Circulars, with ample directions, will be forwarded to all applicants, free. Aug. 1—m12t.

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  2. Hurdles and Cheap Fences.

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  2. Hanging the Gate.
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  2. A Barn for a Small Farm.
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  2. Transplanting Small Trees.
  3. Apples for Market.
  4. Select Fruits for Virginia, New-England, Wisconsin—Failures in the West.
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  6. Select List of the Newer Pears—Dwarfs.
  7. Plums—The Blackberry—Strawberries—Grapes—Insects on the Apple.
  8. Sending Grafts by Mail—Root Grafting.

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  6. Early Melons and Squashes.
  7. Wool Table.
  8. Cleaning Seed Wheat.
  9. To Make Farming Profitable.
  10. Packing Trees for Transportation.

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Jan. 1, 1860.

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THE CULTIVATOR.

THIRD] TO IMPROVE THE SOIL AND THE MIND. [SERIES.

VOL. VIII. ALBANY, N. Y., FEBRUARY, 1860. No. 2.

PUBLISHED BY LUTHER TUCKER & SON,
EDITORS AND PROPRIETORS, 395 BROADWAY, ALBANY, N. Y.

J. J. THOMAS, ASSOCIATE EDITOR, UNION SPRINGS, N. Y.

AGENTS IN NEW-YORK:
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Editorial Notes Abroad.

No. XXVII—A Visit in Suffolk last July.

The Native County of ARTHUR YOUNG—His Works and their Popularity—Stationary Disposition of the English—Ipswich and Woodbridge, and the Drive to Butley Abbey—The Rectory—THOMAS CRISP, Esq., his Farm and Stock—the Short-Horns—Fattening Animals for Exhibition—Disposition of the Farm—the Open Sheep Walks and Furze—Mining for Coprolites—Sheep Boarding out—Rotation Employed, with a "Stolen Crop," and the Operations of Four Years.

A prophet, it may be said, is not without honor, save in his own *county*—and according to Mr. CAIRD, this version of the proverb applies to Suffolk and her famous son ARTHUR YOUNG. Not a successful farmer himself, like many another who can write better agriculture than he can practice—his neighbors were by no means inclined to follow his precepts, and while in other counties proprietors were prompted by them to inaugurate great improvements, during his life they seem never to have met with much favor in his native district. It is perhaps no more than due to the efforts put forth by this eminent man, that we should notice very briefly what they were, and we could take no better time to do so, than when, having crossed the river Stour in coming from Essex, we stand upon the threshold of the county that gave him birth, and which is now farmed largely according to the principles he inculcated, and ready to acknowledge its indebtedness to them "for much of the progress that has been made in the cultivation of the soil and the economical application of labor."

Having succeeded to an estate, and, as Loudon expresses it, "impoverished himself by experiments," at the age of 26 Young's first volume, "The Farmer's Letters to the People of England," appeared, and four years later another series to the Landlords. In the interval he published the narrative of "A Six Weeks Tour" in the Southern Counties and in Wales, another of six months in the North, and a third in the East of England, besides several books upon practical and experimental Agriculture, making during this period a total of eight works in octavo, one of 2 vols., and two of 4 vols. each, and one of two quarto vols. His Tour in Ireland, Annals of Agriculture, &c., followed, and in 1787–8–9 he traveled extensively in France with the view of studying the cultivation, wealth, resources, and national prosperity of that kingdom—the results of which were published in 2 quarto vols. in 1792. A Board of Agriculture having been established, he was appointed its Secretary, and under the auspices of this body prepared a general Agricultural Survey of the counties of Suffolk, Lincoln, Hertfordshire, Norfolk, Essex, Oxfordshire and Sussex. His last treatise was on the "Husbandry of those celebrated British Farmers, Bakewell, Arbuthnot and Ducket."

With us, so many of whom have seen more or less of the different parts of our extensive country, by travel for one object or another, and all of whom are tolerably conversant, through the newspapers, with what is elsewhere going on—it appears strange in visiting a little island (comparatively) like England, to find that a vast proportion of the people have seen but a very limited part of it—that they have always been in the habit of confining their attention to their own local events and ways, and that they differ perceptibly in dialect in districts by no means exceedingly remote from each other. If such continues to be the case in this age of cheap travel and cheap reading, it can readily be imagined how much more it was so ninety years ago, and what an effect—what "a stimulus to improved practice," in Mr. Caird's words, must have been the means which were supplied by these Surveys of YOUNG, for comparing the practices of various soils and localities. It has been the great object of Agricultural Societies and writers, there as here, to get the farmers of different parts of the country well into communication with one another, and the confessed benefit conferred by Young's exertions, is an instructive tribute to the importance of this end.

I have been unable to turn to any general review of these books of Young's. The monument to his memory is of that kind, however, which proves most enduring, for it consists in his careful collection of such a mass of valuable facts. Thus we meet with constant references to him incidentally as an authority, and it is uniformly with a passing word of praise. Loudon remarks of his Tour in Ireland, that "it probably did more good than even the Dublin Society," and Cuthbert W. Johnson says that he was "perhaps the most popular author on Rural Affairs that England or any other country ever produced."

At Ipswich, the capital town of Suffolk, and the native place of Cardinal Wolsey, we come upon the river Orwell, the estuary of which joins that of the Stour at Harwich. Here the Orwell is navigable for vessels of some 200 tons, furnishing water communication for the benefit of several large foundries and machine establishments, at one of which, that of Messrs. RANSOMES & SIMS, we shall make a call as soon as time will allow. At present our destination is

Woodbridge, a thriving market town and port seven or eight miles to the north-east, where as we leave the railway, we shall meet a kind greeting from a gentleman whose stock we have already seen and admired at the Suffolk Agricultural Show, but whose farming will by no means prove the less interesting on that account. Seating ourselves in one of those handy two-wheeled carts so much more common in England, as the traveler at once notices, than they are with us, we are off at a pleasant pace—passing near the Melton station, where we see newly completed and convenient arrangements for auction sales—I think it was stated once a month—for the marketing and interchange of stock of different kinds, and thence away six or eight miles between fields of grain, now, the 2d of July, rapidly approaching "the full corn in the ear;" of mangolds in well-marked rows, and Swedes just proving with a sprinkling of green, that the sower has not sowed in vain; of land yet under the plow and harrow and roller, and probably soon destined to be drilled with turnips; of the stubbles freshly growing green again after the labor of the hay-makers, and of hedges or "fences" as the English call these walls of living green, just beginning to be trimmed back from the wilder growth of the past twelve-month, to the regularity of well ordered farm enclosures.

By and by our road carries us near a building of solid and antique appearance and considerable size, now occupied, we are told, as the Rectory, but supposed to have once formed the gateway only of the massive pile which in former days covered the grounds and bore the name of "Butley Abbey." A little farther, adding a feature to the farm-yard scene not often to be found in that sort of landscape, a sturdy old arch still marks one point in its extensive outline, and jolly round-sided Suffolk pigs are rooting about, where the Suffolk monks—perhaps with equal title to either epithet—used to receive the rents of the goodly lands over whose tithings they probably knew well how to preside, before the troubled times came when their strongholds were toppled over and their dominion passed into other hands. Entering a gateway, a few fragmentary remnants of old columns and sculptured walls, which the plow-share yet meets as it turns the soil near by, shrink back under the drooping shrubbery as if ashamed of their fallen state, and we stroll away from the path, upon the turf here and there cut out for a circle of flowers, a little absent-mindedly, until the presence of others not habited in the garb of the holy fathers, recalls the unmistakable fact that the days of their glory are no more, and that entire taciturnity, however appropriate for the cloister, and occasionally becoming to the American countenance, may sometimes, too, be quite misplaced.

— "You have some fine Short-Horns yonder," we therefore remark, raising our eyes to the pasture beyond the lawn. "How large a herd are you keeping?"

Perhaps twenty or thirty the answer runs, and subsequently we go among them and mark the "Bates blood" that flows in their veins, and find in "Wild Eyes" and others of the family, just that hearty thriftiness which bears witness to the capacity of the breed for flesh-taking when no extra care or forcing processes are employed.

We venture the inquiry it may be, "whether some herds have not been injured by feeding up the best for Shows, to the detriment of their further usefulness?"

Undoubtedly instances of this kind occur, but—argues in effect our host—it is the object of the breeding of the present day to develop such influences in the parent as are most likely to beget the greatest and quickest power of converting fodder into meat, and how are we to determine how well these requirements are met, if we starve our animals into the Show-yard? Let us avoid either *extreme;* but all the rules of the societies can't prevent my neighbor or me from wishing to show—not where, at some prospective period our beasts are going to fill out handsome and valuable carcasses, but where on good keeping they actually do at a certain age lay on that kind of flesh which will pay the feeder and the butcher. And no judge will be willing in his decisions, to be guided entirely by the lank anticipations of future fatness.

— I do not, it is very likely, do justice to Mr. Crisp's reasoning in thus roughly mentioning the impression I gained from what he told me of his views; but I considered it worthy of record, as coming from a man of much practical experience, that he spoke boldly in favor of the custom which there are more ready to combat in words than in practice—of only exhibiting such animals as have been really prepared to "look their best." The question has been much discussed in the past, although it seems at present to be nearly set at rest by the almost uniform consent of breeders.

Butley Abbey is a farm of about a thousand acres, of which I understood that 230 perhaps were in wheat, 150 to 180 in turnips, 150 in barley, 150 in "layer" or clovers and grass, together with beans, peas, &c., while of the remainder a part is permanent marsh pasture, and the rest lies in open sheep walks. The latter are generally blowing sands, with not much herbage except the furze (gorse or whins it is also called) which serves probably to lessen or obviate the action of the wind. The bushes of this furze are eaten off by the sheep, which nibble away at the outer shoots until those in the center grow up beyond their reach, perhaps four or five feet high; it is nutritious, and other animals are said also to be fond of it. But the spines of the foliage are sharp, and require bruising before they can be eaten by cattle with any comfort, and the sheep must have become well toughened to them, one would think, to enjoy it—the plant in fact seeming scarcely less terrible in reality than it does when we read in the botanies that "it bears innumerable dense, roughish, green, furrowed or ribbed branches, spinous at the ends, and beset with large, compound, striated, permanent thorns; leaves few, scattered, small, awl-shaped, deciduous"—a description which I am sure it is fortunate the sheep cannot read, or they would be less likely than before to relish their forage. The engraving above shows the points of the herbage, as well as the flowers with which, earlier in the season than the time of my visit, it is profusely covered—presenting, I was told, a beautiful appearance, and giving the whole moor a golden hue. Indeed some one has written—

Common Furze—(Ulex Europœus)

"And what more noble than the vernal furze
With golden baskets hung? Approach it not,
For every blossom has a troop of swords
Drawn to defend it."*

Of these moors the furze is a natural product, but I believe it is sometimes grown for fodder, while machines for bruising it are catalogued by the dealers. During the day the sheep stray about these unenclosed tracts, and with the aid of his dogs the shepherd collects them at evening to be folded. We went out at dusk for a walk over the farm, and saw a flock, unless my memory is at fault, numbering *sixteen hundred*, or thereabouts, and I was told that it is rarely the case in collecting even so many as this, that the dogs and shepherd leave behind a single one.

After a glance at one other feature on this farm that was a curiosity to me, I shall turn to my note book for a number of interesting facts which Mr. Crisp was good enough to give me during the day or two spent so pleasantly in his company.

Mr. C. Wren Hoskyns, the lively author of the "Chronicles of a Clay Farm," in lecturing two or three years ago upon the progress of agriculture, adduced the word *coprolite*, among other scientific terms, which he said were strange enough in the farmer's ears ten years before, although now commonly understood; and he gave, in proof of his statement, the fact that Mr. Huxtable had then narrowly escaped being reported in the newspapers as the introducer of "*coppery lights* into the dark places of agriculture!"

The material in question, which if it had not been for Mr. Hoskyns' untimely extinguishment, would have had a debut before the world so much more brilliant than its name could very literally authorize, has been largely found on Mr. Crisp's farm. The Suffolk crag and some other formations, abound in these coprolites—often so scattered as not to be worth exhuming—now and then occurring, as in the present case, in large masses; they are the fossilized excrements of extinct lizards (saurians) and other reptiles, and, as dug, washed and heaped up, no one in passing would suppose the pile to be anything more than ordinary gravel. They appear, however, oftener in cylindrical forms, and while they have the same water-worn exterior, one perceives on breaking them that they are quite different from the stones for which he took them at first. In use they are either ground or treated with sulphuric acid, as bones are, and contain, according to Way and Gilbert, from fifty-two to fifty-seven per cent. of bone earth or phosphate of lime. I understood their intrinsic value to be between $11 and $12 per ton, while they sell at different rates according to the state of the market. Between *four and five thousand dollars* worth had been taken out and sold from a single acre—so that the discovery of their value was not only a boon to English farmers in general, but in particular to those proprietors whose lands happen to have been a favorite resort for the reptiles of antiquity—possibly the rendezvous of those which were driven out of the sister island by the valiant St. Patrick.

The Sheep of this part of England, as I remarked when writing from the Show at Ipswich, are prolific mothers and good milkers, and the females are consequently in demand. Mr. Crisp has a herd of about 2,000 breeding ewes,[*] to which he puts a Leicester or South-Down tup. The lambs it is his practice to sell, the autumn after they are one year old, or indeed any time during that season according to circumstances, and the price received for them varies with age and quality from $7.50 all the way up to $15 per head. The lambs are dropped about March, and when they are ready to wean after harvest, are put out upon the stubbles to eat the "seeds" that were sown in the spring, and at night perhaps folded upon a turnip field as soon as the latter is ready. But Mr. C. keeps a great many sheep out a-boarding, as we might express it; that is, there are many smaller farmers, who do not have the means of keeping a large flock the year round, and who are glad to take in those of their neighbors both upon their stubbles and to eat their turnips. For the lambs thus sent out upon stubbles on other farms, about 3 cents a head per week is paid. The price paid for turnip land is in the neighborhood of 6 cents a week for each head, though it varies with the character of the crop, &c.; when it does not exceed this price, Mr. C. considers that there is room for profit to the owner of the sheep. Sometimes he has flocks at a distance of 50 miles or even more, and a great advantage of this method to the small farmer, arises from the fact, that while the few sheep he would want to keep might be all winter in eating his turnips off, if 500 or 600 come upon his fields at once, they are all cleared by Christmas and ready for plowing.

We walked through a field which produced a crop of wheat last year. Mr. C. had also obtained from it, what is called a stubble or "stolen crop" of turnips,—seed drilled in rows 18 inches apart as soon as possible after harvest, and the roots folded off this spring. He calculates the value of such a crop at about $7.50 per acre, for a fair yield will keep 20 sheep 6 weeks—an equivalent at the rate paid for turnips elsewhere to $7.20, while their manure upon the land is rated as worth about 3 cwt. of guano—more, probably, than the cost of sowing and cultivation. The latter consists in the use of Garrett's horse-hoe five or six times, according to the necessity of the case, and in one thinning and hoeing by hand, followed by a forking off of the weeds, costing about 50 cents per acre. This spring, after the turnips had been fed off, the land was scarified and plowed. Beets were sown about the first of May, after a manuring of from 8 to 12 loads of farm-yard dung per acre—the sheep-folds having supplied the additional fertilizing material, which, without their intervention, would have been purchased in the shape of artificials.

We have thus seen two crops in the system of rotation, the wheat and beets, with an extra bite of turnips for the sheep intercalated. On land where the last is not taken, the second year's crop would be turnips instead of beets. In either case, the roots are folded off along from autumn until spring, or otherwise harvested—the beets bearing the frost better and lasting later in the season than the turnips. I shall have occasion to refer hereafter to the fact that the quantity of beets grown in proportion to that of turnips seemed to be almost universally on the increase in Great Britain—of late years mangolds are said very generally to have given the better satisfaction of the two, and to have gained wonderfully in popular favor.

Sometime in March of the third year, the land is scarified for barley, with additional manure, if the sheep have not already supplied enough. Mr. Crisp drills in six to eight pecks per acre, and sows also twelve to fourteen or sixteen pounds of "small seeds," with rye grass, pretty much in the following proportion:

8 lbs. red clover.
4 lbs. trefoil.
2 lbs. white clover.
1 to 2 pecks rye grass.

The trefoil or yellow clover, as it is also called, is considered very valuable for sheep. If this "layer crop," as it is called, is far enough advanced in autumn, it is fed off that season a little; the next spring, at any rate, it is ready either for grazing or to come on for hay,—yielding of the latter an average of about two tons per acre—thus completing the rotation in the ordinary "four course shift."

In October the land is plowed, or earlier if necessary, having previously received a coating of manure. Mr. C. sometimes uses a haymaking machine to spread his manure with; hereafter I shall be able to give a cut of this implement, as well as of the scarifier referred to above. Wheat is then sown, coming forward as the first crop in the succeeding quadrennial series; and here I may close for the present, for I find that we should have to linger longer than time will now permit, in order to see the rest of the stock, and take a drive to the other farms under our host's cultivation, in one chapter. L. H. T.

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INFLUENCE OF THE SURFACE SOIL.

There is something remarkable in the influence on vegetable growth, of the upper stratum of the soil. Take, for example, its effect on the growth of young trees. If a young peach tree, for instance, is allowed to stand in a good soil, which from neglect becomes hardened and crusted on the surface, it will make but a few inches growth in a single season. But if, instead of becoming crusted, the surface of the soil for only an inch or two downwards, is kept mellow, and daily stirred, the growth of the tree will be more than double, and sometimes more than quadrupled, although the roots may all be below the stirred portion. A more striking difference occurs when the surface is allowed in one instance to become coated with grass, and in the other is kept mellow. Although the roots of the grass extend *downwards* but a few inches, yet we have known this mere surface-coating so to retard the growth of large peach trees, that they would not make more than three or four inches growth, while similar trees, standing in mellow cultivated ground, grew from two to three feet in a season. The roots of these trees were mostly a foot below the surface.

We do not propose here to discuss the theory of this remarkable surface influence, but merely to point out the facts, and to suggest some important practical hints.

Manure for trees and crops operates in two important ways. The first and most obvious is by its direct supplies to the small rootlets in the soil. To afford such supplies in the best manner, it should be finely pulverized, and minutely diffused through the soil at just such a depth as the roots of the trees and crops extend—neither wholly buried deep, nor left wholly near the top—but be intermixed through every part. This mode we do not propose to speak of at present. The second way is its influence on the crust of the surface, as already alluded to. On very light sandy or gravelly soils, this influence is less important, so far as the mellowing effect of manure mixed with the surface is concerned. On such soils, there is little to hold or retain its fertilizing portions, and it is soon dissipated and lost. Straw or coarse litter, strictly as a mulch, is better here than manure merely. But on clayey soils manure becomes highly advantageous. It combines with and mellows the crust in a most efficient manner. The great advantage which it possesses when thus applied to clay soils is not only in softening the hard crust to which such soils are liable, but in the ready combination which is effected between the clay and the volatile manure.

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[*] In another letter, we shall see that Mr. Crisp occupies two other farms beside that of "Butley Abbey."

There are various ways in which surface manuring and mulching with straw benefit crops. Among others a most important one is shelter in winter. The soil about young trees and plants, if perfectly bare and hardened by exposure, radiates heat upwards towards a clear sky on a cold winter night with great rapidity. A very thin coating of manure or litter is a great protection. Hence the benefit derived from the *winter mulching* of young fruit trees. In severe regions, the difference between the success and failure of dwarf pears, has sometimes resulted from this alone. Exposed crops of winter wheat have been saved from winter killing by surface manuring in autumn with thin coarse material.

The protection which such a coating affords the soil and the plants upon its surface from severe and cutting winds, is frequently of great importance. A screen of trees, or a high, tight board fence, often saves young trees or plants from destruction; and next to such a screen is a mantle covering the bare earth.

The great practical question arises, how much and how frequently is it most profitable to manure the surface? What proportion of the manure applied should be diffused through the soil, and what proportion left at the surface? At what season of the year should the work be performed? We have tried but a limited number of experiments to determine those points, and those of not much accuracy; but their general teaching was in favor of autumn or early winter manuring, if to remain upon the surface of untilled land, or to be plowed in in the spring; and on tilled clay lands a small portion of the manure left on the surface, and only harrowed in in the spring or early summer, has had a good and sometimes excellent effect. On light soils, surface manuring during the summer has proved of little benefit, even if harrowed into the top soil. We believe the subject is one worthy of further examination.

HINTS ON FARMING CLAY SOILS.

Nearly two years ago (Co. Gent., May 20, '58) we called for light on the question of the best system of culture and cropping for improving a clayey soil, but so far as any definite reply is concerned, we called in vain. There are now, as then, scattered hints in the various agricultural publications of the day, but no writer has taken up the subject for a full and exhaustive discussion thereof. We do not feel competent to the task, but the want above stated has incited us to prepare the following hints and suggestions, originating in our own experience, or gathered from a variety of duly acknowledged sources, thinking them worth thus laying before our readers.

Thaer says, in his *Principles of Agriculture*, that "Land should be chiefly valued according to its consistence; the greater the degree of this quality which it possesses, the nearer does it approach to first class land; but the smaller the proportion of clay, and the larger the quantity of sand which enters into its composition, the more rapidly does it fall in value." Experience as well as history confirms this remark as correct. All the great deserts of the world are composed mainly of shifting sands. The most fertile soils, wherever found, contain a large portion of clay. Clays, however, differ largely in agricultural value, as may hereafter be shown.

One reason for the valuable character of clay soils, is found in the fact that they contain, more than any other soil, the elements of fertility within themselves. They are usually more or less productive, if rightly cultivated, without aid from stimulants or manures, but acknowledge such aid very gratefully when received. A recent writer says "they are deposits of various earthy compounds mixed in many cases with organic matter, and frequently require only aeration to render them productive."

As an illustration of cultivation or continued cropping without manure, we may refer to the Lois Weedon experiments of Rev. Mr. Smith of England. We find them noticed very opportunely for our purpose in a recent issue of the *Boston Cultivator*, and quote the conclusion of this paragraph therefrom. In these experiments, which have now continued for twelve consecutive years, the same ground has been cultivated in wheat, without manure, giving an average produce of thirty-five bushels per acre, and with as good a yield now as when the experiment first commenced. "The method is to till the land by the spade to the depth of the subsoil; plant three rows of wheat, with a space of one foot between each, and then leave a breadth of three feet, which is used as a fallow and kept open by the spade. When the crop is taken off, the fallow spaces are seeded, and the ground previously occupied left vacant; thus in reality producing wheat on half the ground every year."

While copying the above, we remember an exposition of this system given in the *Mark Lane Express* last summer, and on referring to that journal find that light land, *dressed with clay*, has also produced uniformly excellent crops of wheat under this system. So that clay is not only valuable as an original component of the soil, but as a manure for soils in which it is deficient. It is stated as above, however, that green crops—beans, roots and cabbage—have required animal manures to keep up the productiveness, not finding in the clayey soil all the elements required. We noticed some years ago a detailed statement where corn on sandy land was manured with a shovel full of clay to each hill, and the increased product was considerable—equal in fact to that from hog manure applied in the same manner. The soil on which the Lois Weedon experiment is in progress, is "a natural wheat soil"—a clayey loam with a subsoil of yellow clay. The depth to which it has been dug is sixteen inches, and this only for a single year in the course. It is now found that the staple soil is richer than the subsoil, and in fact gives better crops of wheat than at first. Taking all things into account, the experiment goes far to show that clean and frequent cultivation, with abundant room for the crop, goes far on a clay soil to supply the want of manure. The alternate strips of fallow have time for storing up the aerial food which their mellow and friable state allows them to obtain. On a soil deficient in clay no such result would follow, sand having no attraction for ammonia, and but slight power to hold it when artificially applied.

The practical lesson taught us is, that to farm clay soils profitably we must take full advantage of the property they possess of attracting and holding the elements of fertility supplied by atmospheric influences—air, water and light. To this end they must have exposure to the air, freedom from stagnant water, and a course of tillage which shall keep them in a comparatively mellow state. The natural characteristic of clay is to attract and retain water, to harden in drying, and to become impervious generally to all ameliorating influences, and the more so the longer they remain undisturbed. This, however, depends more upon their state of *drainage* than upon anything else, and this naturally accords with the amount of clay present in the soil, and the porous or non-porous character of the subsoil.

Other hints and considerations will be added in future numbers, and we invite correspondents to join with us in the more practical discussion of the subject.

[For the Country Gentleman and Cultivator.]

Management of Meadows—More Grasses Wanted.

Messrs. Editors—It is generally admitted that good grass crops are one of the foundations of good farming, and this being the case, the importance of more attention being given to this subject will be at once apparent. A very excellent article upon this subject appeared in the *Country Gent.* of Aug. 4th. It contains much truth in a nutshell, and it is now alluded to in confirmation of the importance of top-dressing grass lands. On this point you remark with truth, "that even were it to be plowed the next season, for a grain crop, the manure could not be better timed or applied." I have the past season, by top-dressing the previous September with 15 loads of stable manure per acre, doubled the yield of timothy and also of orchard grass, as compared with portions of the field unaided in this manner. I have also trebled the product of clover and blue grass, by an application of 10 bushels of unleached ashes, costing but $1.20 per acre, and have seen the action of this cheap fertilizer on these grasses with very decided effect for three successive seasons—200 lbs. of Mexican guano has had an improving effect for two years, applied about the 1st of April.

Mr. Flint, in his recent valuable work on grasses, states the well-known fact that in England they rely more upon a mixture of grass seeds, than upon a variety sown separately.

In the several tables Mr. Flint gives of mixtures of seeds, it is observed that there are none containing a less weight than 35 lbs. for one acre, but the majority contain 45 lbs. seeds. Therefore, if this be the weight of seed required for an acre, we have in most parts of the United States, been up to this time laboring under the error of sowing too small a quantity. In the middle States, the usual amount of timothy sown per acre is one peck, or 11 lbs.; (the seed of this grass weighing 44 lbs. per bushel,) and thus, according to Mr. F., we have been sowing but one-fourth of the necessary quantity. With orchard grass, two bushels per acre has been considered liberal seeding—this weighing 12 pounds per bushel. We have therefore been using but little more than half the required amount. Cannot some of your practical grass growers enlighten us upon this important matter?

We want, to sow with timothy, some valuable grass, or several varieties, that will take the place of it when it runs out, which it will do in a few years. Red top would in some measure answer this purpose, but there are no doubt other varieties that could be brought to aid in the matter, which could be suggested by some of your many hay-growing readers.

The difficulty with that valuable hay and pasture forage, orchard grass, is its propensity to grow in tussocks, leaving so much land uncovered, and thereby reducing the product perhaps one-half. The great desideratum with this grass would be to obtain a variety ripening at the the same period, and which would fill up the intervening spaces. By this means the crop of hay might be doubled, and leave as good aftermath for grazing. What variety would suit best to sow with orchard grass? A Subscriber.

Maryland, Dec. 30, '59.

P. S.—Since the introduction of mowing machines into this neighborhood, 10 years since, our timothy meadows do not run out so soon as they did when mowed with the scythe. The reason is that the mower leaves a longer stubble—say three or four inches—while the scythe cut so closely as to destroy the roots of the grass.

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[For the Country Gentleman and Cultivator.]

THE CLINTON AS A WINE GRAPE.

Messrs. Editors—Your notice of the Clinton Wine reminds me of some I made a few years ago, which was pronounced by physicians an extra fine article. Your correspondent will find it equal to the best Port, such as we could get twenty-five or thirty years ago, without the addition of any sugar, but it requires time to lose a harshness which some dislike at first, but which pucker, as some call it, becomes agreeable in a little while. I have not the least doubt but that the Clinton will yet be extensively planted for wine. It is one of the hardiest, most vigorous and productive vines we have—knows no disease, and to my taste is quite an agreeable eating grape when fully ripe, and will keep till mid-winter without any care scarcely. I am buying hundreds for my own use. S. M. *Calmdale.*

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Statistics of New-York Cattle Market for 1859.

We quote the following interesting statistics from the New-York Tribune:

139,000,000 Pounds of Beef Consumed in One Year—Over $12,000,000 for Beef.

The annual tables of the great metropolitan market of live stock will be read with interest by all who are engaged in the production, and they should be by all who consume the flesh of butchers' animals. These tables are particularly valuable to those who are engaged in the business of buying and bringing live stock to market, and to all who handle the cattle or meat between the producer and the consumer.

We have had something over seven per cent. increase in the number of bullocks, but the general opinion is that the weight is from 25 to 50 lbs. each less on the average than it was in 1858, owing to the enormous influx during the fall and early autumn of small, lean stock. We have estimated the average net weight of all the bullocks brought to market during the year at 6½ cwt., and adding the cows, which eventually nearly all go to the butcher, we have 214,764 head, which at 6½ cwt. each, will give 139,596,600 pounds of beef. We find that the average price of the whole year is 9⅛ cents a pound, net, which will make the sum of $12,738,189.75. This would make an average per head of $59.82, and a fraction. Estimating all the bullocks sold at an average of $60 a head, it will make the sum of $12,885,840.

It is curious to observe that of the 154,878 cattle reported for sale at the great weekly markets in Forty-fourth street, only 2,413 head arrived on foot. A few years ago none arrived in any other way.

There has been a considerable increase of the number of cattle reported from this State, and a large falling off from Illinois. The increase in New-York is made up wholly of lean cattle, sent to market to save feed the present winter, as hay is unusually high. The falling off in Illinois cattle is owing to the failure of the corn crop in 1858, by which farmers were unable to fatten their stock for market. This deficiency will be made up in 1860, unless we are greatly mistaken in the signs of the times.

We have made some useful comparisons, and commend others to study these tables, and compare them with former years.

The deficiency of corn in the West last winter has had a very marked effect upon the Hog market, reducing the number 150,000 head below the receipts of 1858. Of Sheep this year there has been an increase of 50,000 head over 1858. On the whole, it must appear from these figures that we are decidedly a meat-eating people. It must be understood, however, that this market supplies not only New-York City and Brooklyn, but in part all the cities and villages, and many of the country residences, within a radius of sixty miles. It is said that a good many of the animals included in our weekly reports of the Cattle markets go back again to the farmers. We have to answer that more than an equal number come to the city ready dressed, so that the aggregate given as our demand upon the country to supply our meat-eating propensities, is not too large.

From the tables alluded to in the above, we gather the following facts. The arrivals at the New-York market during the year 1859 were:

Beeves,	154,878	Sheep,	504,894
Milch Cows,	9,492	Swine,	399,685

The following states furnished the Beeves:

New-York,	42,085	Virginia,	1,001
Pennsylvania,	3,299	Iowa,	3,997
Ohio,	35,133	Connecticut,	818
Indiana,	8,692	New-Jersey,	542
Illinois,	35,171	Michigan,	5,334
Kentucky,	15,188	Canada,	3,309

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Comparative Prices-1858 and 1859.

PRICES OF BREADSTUFFS IN NEW-YORK, DEC. 31.

	1858.	1859.
Superfine State Flour, ℘ bbl.,	$4 20@$4 40	$5 20@$5 30
Extra State Flour, ℘ bbl.,	4 95@ 5 20	5 40@ 5 50
Superfine Western Flour, ℘ bbl.,	4 30@ 4 65	5 20@ 5 30
Extra Western Flour, ℘ bbl.,	5 50@ 8 50	5 85@ 7 25
Canadian Flour, ℘ bbl.,	5 30@ 6 50	5 60@ 6 80
Southern Flour, ℘ bbl.,	4 75@ 8 75	5 45@ 7 25
Rye Flour, ℘ bbl.,	3 25@ 4 10	3 60@ 4 40
Corn Meal, ℘ bbl.,	3 40@ 4 00	3 60@ 4 20
White Wheat, ℘ bush.,	1 20@ 1 55	1 35@ 1 55
Red Wheat, ℘ bush.,	68@ 1 27½	1 18@ 1 30
Corn, ℘ bush.,	72@ 85	86@ 89
Rye, ℘ bush.,	75@ 78	88@ 90
Barley, ℘ bush.,	70@ 92½	76@ 88
State Oats, ℘ bush.,	49@ 52	46@ 47

PRICES OF PROVISIONS IN NEW-YORK, DEC. 31.

	1858.	1859.
Mess Pork, ℘ bbl.,	$17 00 @$17 62½	$16 06½@ — —
Prime Pork, ℘ bbl.,	13 00 @ 13 40	11 50 @ — —
Cut Meats, ℘ ℔.,	— 6½@ — 9½	— 6½@ — 10
Coun'y Mess Beef, ℘ bbl.,	7 75 @ 9 00	5 08 @ 5 25
Lard, ℘ ℔.,	— 11 @ — 11½	— 10½@ — 10½
State Butter, ℘ ℔.,	— 16 @ — 26	— 15 @ — 28
Cheese, ℘ ℔.,	— 8½@ — 9½	— 8½@ — 11½

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Advertising Gratis.—We have several *advertisements*, in the shape of communications, offering choice seeds in exchange for other choice seeds or a few postage stamps, which justice to ourselves, and those who advertise their goods regularly, compel us to decline. All who have valuable seeds, plants, implements or stock for sale or exchange, will find our advertising pages an excellent medium through which to apprise the public of the fact.

PRAIRIE GROWN TIMOTHY SEED.

The seed market is now largely supplied with timothy seed grown upon the Illinois prairies, and it is usually a very perfect article. The weeds which often crowd our meadows, are as yet almost unknown there, and good crops of fine quality can be grown and harvested at but trifling expense. A friend tells us of an instance where six hundred bushels were raised upon eighty acres, and harvested with a reaper, and then threshed and cleaned by machinery—paying a very handsome profit. He has given considerable attention to the subject, and commends the prairie grown seed as perfectly free from noxious seeds—an important consideration to every farmer.

The land is usually cropped with different grains after the first breaking, but it must not be cropped too severely, or the soil will become somewhat foul, and worn so that the grass seed will not catch as well as upon newer land. The seed is generally sown with spring grain at the rate of a peck per acre, and rolling will usually sufficiently cover it, as well as better fit the ground for the employment of machinery in harvesting. Perhaps two crops of seed is as many as can be profitably taken off; then cut one year for hay, then plow up for other purposes, following here as in most places, a system of rotation.

Timothy must be cut for seed as soon as it fairly begins to ripen, or it may be badly wasted by winds or beating showers. As soon as the seed is ripe at the upper end of the head, it may be cut, and will then perfect its whole product of seed in the shock, while drying. Let it be bound in small bundles and set up immediately after the reaper; it will cure in a few days, and should then be secured in the barn or stack, or better be threshed at once. In stacking particular care should be taken to secure from injury by rain and damp, or it may suffer loss which would go far toward providing a roof to cover it. It is also, it should be remarked, an advantage of early cutting that thus a fair quality of hay is secured.

The best soil for timothy is moist rather than dry, but it flourishes well on any good wheat soil. We should be loth, however, to crop land which produced wheat well, with timothy, as it would injure it for the production of this grain, taking, as it does, nearly the same elements from the soil. But upon the newly opened prairie farms of the west, it is generally useless to talk of exhausting the soil; present profit is far more considered than the wants of the future. It is too much so everywhere.

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TESTIMONIAL TO JOHN JOHNSTON.

In the *Country Gentleman* of Dec. 29, it was stated that a number of gentlemen interested in the promotion of the agriculture of the state, had presented to JOHN JOHNSTON of Seneca county, a testimonial of their appreciation of his services in the cause of agricultural improvement, consisting of a massive silver pitcher and a pair of goblets, embellished with appropriate agricultural emblems. They were forwarded to Mr. JOHNSTON by HENRY S. OLCOTT of the N. Y. Tribune, who has sent us the following acknowledgment from Mr. Johnston:

NEAR GENEVA, 27th Dec., 1859.

HENRY S. OLCOTT, Esq.: *My Dear Sir*—I received your letter of the 24th inst. and also the rich Christmas Gift mentioned therein. Truly, I may say that I was both surprised and delighted—surprised, because the present was entirely unexpected—delighted, for I suppose there is no man that lives who is not pleased by a compliment to his opinions and his way of showing them forth. More especially when those opinions at first met with much opposition and some feeling, and have only come to be admitted as right, after an almost obstinate abiding by them on his part. And it very much gladdened me—indeed it did, that the merits of a system of farm management—its stocks and its products, had been so well exhibited as to attract the attention of so many intelligent agriculturists as to be thought worthy of such a magnificent gift.

Politicians and heads of mercantile and manufacturing establishments, and captains of packets, are not unaccustomed to such reward for conduct or exertions considered meritorious; but I know not any practical farmer who has ever attracted the notice of his fellows to his undertaking and his management by their fitness and good results, so as to receive such a testimonial; and it very much pleased me that it was to a farmer, for his ordinary day by day and year by year management, that this has been done; and I hope it will stimulate others in like position with myself, to exertions and experiments in improving their farms and farming operations, when they know that the eyes of farming men are looking about to discover, and their tongues ready to praise efforts in this direction. For I feel sure that with an efficient system of underdraining—a far more liberal method of feeding the cattle and sheep—a more plentiful manuring, and a higher state of general farm culture, the American Farmer may place himself in independence, and push forward his class to the position it ought to occupy—the front rank of human society. It is the farmer that puts the bread in the mouth of the rich and the poor, and feeds alike kings, princes and beggars; and should the farm labor of the land cease from May till November for but one season, dire would be the calamity to the inhabitants of this globe.

I have for many years looked upon the occupation of the farmer as of vastly more importance than that of any other human being—not the mere drudging occupation of the daily labor he pursues, but that labor industriously followed, directed by forethought, and carried on with a lively and intelligent eye to all the teachings of the daily and yearly experience he has with the soil beneath his feet, the elastic atmosphere about him, the insect life that swarms his fields, and the useful brutes under his control. For plenty makes peace, and he that raises plenty is a peace-maker, and it is in peace and plenty that man must reach his highest development, and I know of no land on the face of the earth, where so great results in husbandry and the elevation of the husbandmen (and men in general) may be reached, as in the United States.

But I must not delay longer giving you and the gentlemen connected with you, my hearty thanks for your kindness and consideration in rendering me this gratifying compliment. May success attend you and them all in the pursuits which we love and follow, and in every way and effort in which I may assist in pushing those pursuits towards perfect results, I am with great respect and esteem, your and their obedient servant. JOHN JOHNSTON.

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[For the Country Gentleman and Cultivator.]

FARMING AT HORNBY.

Culture of Potatoes and Carrots—Management of Grass Lands—Irrigation and Draining—Seeding.

EDS. COUNTRY GENTLEMAN—I came to this country seven years since, to see the country and purchase some land in Missouri and Iowa. On my first visit, and every subsequent one, I made a visit to Hornby, to see a farm that has been made out of the forest in the last thirty years, and a farmer with whom I intend in 1861, to finish my agricultural education, at the age of seventy—if I should live until that time,—and take four of my grandsons with me, and stop from March to December, and if possible educate them practically, that they may not only farm well but cheaply.

I have had some experience with the agricultural schools of Great Britain, as well as several of the best on the Continent, and am constrained to say that the art is very imperfectly taught at those I have visited, compared with Hornby, where agriculture is understood practically. The

Principal understands what his soil lacks for all the plants he grows, and applies the deficiencies with skill and profit. He has no use for guano, poudrette, bone-dust, or any of the popular commercial manures of the day; yet the most of his crops, on his hilly, cold, thin soil, are better than can be found on the richest land in Europe or America. As much as we boast of our root crops in England, there can rarely be found in her Majesty's Government, or at any of the government trial-fields of Continental Europe, such a field of potatoes or carrots as on this farm.

The manner of his culture of potatoes is simple when understood. After the ground is put in order, his furrows are made with a wide plow that runs deep by going twice in the same furrow, turning the furrow each way. Then a subsoil plow is run by the aid of three horses in each furrow; then a machine which he sets so as to make two small furrows in the main furrow. The machine has four small plows made fast to two pieces of timber drawn by a horse. The two forward ones are placed so as to throw the mold out with a wide flat share that runs under the soil; the two hind ones are set so as to turn the mold into the furrows, making a place on each side of the furrow for the potatoes, so that the plow which is used for plowing in cannot disturb them when plowing them in, the potatoes being planted zig-zag on each side, at twelve inches apart, making two rows in the same drill. They are then rolled down with a heavy roller, and dragged until they come up, when the horse-hoe and shovel-plow are freely used. Then the subsoil plow is used with three horses twice between each row, which makes deep, mellow earth sufficient for three or four plowings with a double mold-board plow; and in case of a drouth, as there was last summer, he attaches wings to these plows, and raises the mold as high as he chooses, the work being done with horse-power and machinery. As he does not use a hoe, the furrows being exactly straight, they can be dressed with the plow better than is usually done with the hoe, and his potatoes are perfectly free from weeds.

He substitutes the subsoil plow in cultivating his carrots instead of the spade, which saves nine-tenths of the labor. He usually plants them late in the fall.

His mode of draining and irrigation is so far in advance of anything that I have seen elsewhere, that I wish to say one word, that those who lack hay may profit by his teaching, as it is so unlike anything that I have ever seen or heard of. He can irrigate almost anywhere, and in this lies the great secret of his enriching his land. By drawing the water to a given point where he makes a pond, which he plows when dry and cultivates when the water is in, and makes it thick as mud, and runs that on to his meadows and places along the roadside, and runs the hard-pan (or clay) on to his grass land. There is not a stream running on the farm that now runs where it formerly did. He has changed all the channels, and carried them to the highest ground possible, and used them to enrich his land. He showed me where he run on five hundred cubic yards of water in one day, by the use of two teams to plow and one to cultivate, besides leveling down a bank. He says, and I have no doubt of the fact, that clay run on to meadows is better than even barnyard manure, for the reason that the latter makes it grow more coarse and more likely to fall down, while the clay makes a solid firm growth, if put on with skill, so as not to rot the sod, which is too often the case even in Italy, where they have practiced it for the last 2000 years, and where they convey the water from rivers in canals, and have accomplished wonders, but I saw no such results, or the entire character of the soil so changed for the better, as on the hills of Hornby, where some as good alluvial soil has been made in the last seven years, as can be found on any of the river bottoms, where there is not even a spring or running brook on the farm that does not head on the same. There is a know-how to do everything, and when and where to do it. To say the least, I saw ten acres of meadow this unpropitious season, the best I ever saw in any country. The timothy and redtop stood even all over it, five feet high. I measured several stalks in different parts, that were 5½ feet, where no manure had ever been put, and have no doubt there was more hay grown on it, than on 100 acres of the common meadows of the country.

The manner of seeding down lands, like most other things, is peculiar to himself. Every grass seed is coated with tar, (as every other seed is that is sown or planted,) and rolled in lime or plaster, which ever is best adapted to the plant. The grass seed is then sown on the newly cultivated ground, and only rolled after sown, if sufficiently dry to use the roller, and before the roller passes over it. If there are any sods of blue grass that have not been killed by cultivation, or have not been set out by the plowman, they are set out before the roller, with a hoe, and they, as well as the seed, never fail to GROW.

Let any farmer visit this farm in July or August, and he will see one of the most beautiful sights I ever saw, in the matured grass, the growing roots, and the ripening corn, and all this accomplished with one man to the 100 acres, as nearly every thing is done with machinery and horse power. The machinery is much of the farmer's own making or invention, among which is his drain plow, with which he makes drains for two cents per rod, that are quite as good on his clay soil, as those that cost a dollar.

I am now convinced more thoroughly than ever, that there is more in good farming than in good land, and to repeat his own language, a farmer must not only be a working but a thinking man, and above all things else, an observing man, as he can learn from the wild plants of nature that grow on his soil, what it is best adapted to, and what application is necessary to make it productive, better than from all the chemists on earth. E. G.

St. Louis, Mo.

TOP-DRESSING MEADOWS.

EDS. CO. GENT.—As I see the subject of top-dressing meadow land is receiving considerable attention among your correspondents, I will throw in my mite, by giving my experience in top-dressing.

I have a piece of meadow, about six acres, that I seeded to timothy in the spring of 1856, after barley. It being a very dry season, it came in thin. The next season I mowed it, and got about half a ton to the acre. It was old land, clear from stumps, and rather a hard clay subsoil. Well, I concluded I would try top-dressing it with manure. So the next winter I wintered twenty cows and four horses, all of which I stabled, and every morning through the winter, after my stock were let out of the stanchions, I would take my team and sled, and take up the manure that had been dropped through the night, and haul it out on to the meadow. I left it in heaps as even as I could. In the spring, as soon as it thawed out, I spread it evenly, and the result was the next haying I cut full two tons and a half to the acre, and it continues to do about the same yet. Since that, I have tried other pieces with the same good results. E. ROZELL. *Bradford Co., Pa.*

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AN AMERICAN AMONG THE ENGLISH FARMERS.—It often affords us pleasure to notice the accounts of the warm reception and hearty good feeling which is extended to distinguished Americans while visiting the mother country, by the lords, noblemen, and members generally, of the agricultural societies of that country. The prejudices that once existed between the citizens of America and those of England, seem to have given place to that brotherly regard that should ever characterize the intercourse of members of the same great family, and speaking the same tongue. These friendly visits and the interchange of thought and sentiment among the farmers of these two great nations, are productive of universal good.

We have recently met with several notices from foreign journals, of the marked attention with which our fellow-citizen and co-laborer in the cause of agriculture everywhere received, on his late tour through England. We allude to LUTHER H. TUCKER, Esq., of the *Albany Country Gentleman*. In attending various gatherings of farmers' and agricultural societies, in Great Britain, Mr. Tucker was often called upon to respond to toasts and sentiments, highly complimentary to him, and to the country which he represented.—*St. Louis Valley Farmer.*

Beans and Indian Corn for Milch Cows, &c.

R. H. Brown, of Greece, informs the editor of the Genesee Farmer, that he fed his cows early last spring, with three pints each per day of Indian Corn and white beans, ground together, in equal parts. He never had his cows do so well on any other food; they gave a large quantity of milk, and the calves were the finest he ever raised. He says he shall sell no more beans, but feed them to his cows.

Indian corn contains a large per centage of oil, starch, sugar, and other carbonaceous or fat-forming principles, and it is thought to be more productive of fat than of milk, when freely fed to milch cows; while peas, beans, and vetches, (according to the statements of some writers,) contain three times as much nitrogenous or milk and flesh forming matter as corn.

To render the largest possible amount of the nitrogen of peas, beans, &c., assimilable, there must be, in the food, a corresponding amount of *available carbonaceous substances;* but there is a deficiency of these substances in peas, beans and vetches; consequently, a large portion of their nitrogenous constituents—the true flesh, milk and wool forming principles—are not, when fed alone, assimilated, but voided in the excrements. If the above views are correct, they explain the good effects resulting from Mr. Brown's corn and bean meal mixture.

Beans are, doubtless, a valuable feed for milch cows. In a late number of the London Gardener's Chronicle, Mr. McAdam, of Staffordshire, who keeps a hundred cows, says, in his experience in the dairy business: "After having tried various methods and different sorts of grain, as oats, wheat, barley, Indian corn, oil cake, rape, &c., I decidedly prefer bean meal, both for quantity and quality of milk and butter." Bean straw, when properly prepared, is a valuable feed for milch cows. Mr. Horsfall says: "Bean straw, uncooked, being found to be hard and unpalatable, it was steamed to make it soft and pulpy, when it possessed an agreeable odor, and imparted its flavor to the whole mass. It was cut for this purpose just before ripening, but after the bean was fully grown, and in this state was found to contain nearly double the amount of albuminous matter (so valuable to milch cows) of good meadow or up-land hay."

Whether some of the varieties of our field or garden beans, would be more profitable to grow for feeding purposes, in preference to the English field beans, or not, I have no means of ascertaining. In the Co. Gent. of 25th of last August, it was stated that Mr. C. S. Wainwright, of Duchess county, "had been raising English beans for cattle feeding. His crop last year was successful, and this year it promises a very gratifying yield." Mr. W. is well known as one of the most successful and largest breeders of North Devons in the United States.

Mr. Wainwright would confer a great favor upon many of the readers of the Co. Gent., if he would, through the columns of that paper, favor them with the result of his experience in the culture of the English bean, and the feeding value and profit of the English bean, when contrasted with Indian corn, oats, the common field bean, roots, &c.

Some weeks since, John Couch, Esq., of Warner, N. H., who is one of the most successful growers of fine wool in that section, purchased in Boston 60 bushels of white beans, of fair quality, for feeding to his sheep. They were put up in flour barrels, and cost him at the Warnér Railroad depot, just one dollar per bushel. Corn is worth one dollar and ten cents.

And now the question comes up—Will it not be more profitable for Mr. C., to have an equal number of bushels of corn mixed and ground with the beans, than it will to feed the bean meal alone? If the views advanced in the third paragraph of this article are correct, it certainly would be better to give equal quantities of bean and corn meal, even if the corn should cost him one dollar and fifty cents per bushel, for then his feed would possess, in nearly the right proportions, the necessary requisites for the greatest production of "fat, muscle, wool, and milk," and a much larger proportion of the nitrogen of the bean would be assimilated, instead of passing off in the excrements.

It has been believed by some persons that none but animal food, milk and meat, contained all the elements required for the support of life; but such an idea is erroneous, for vegetable substances—the grasses, grains, fruits, nuts, roots, tubers, &c.—contain all the elements, and in most cases in nearly the same proportion as they are found in animals. Now all these foods possess, in animal nutrition, a three-fold value—1st. Bodies containing nitrogen, like the *gluten* of corn, wheat and oats. When the flour of wheat is made into a dough, and this dough is washed in water upon a fine sieve, a milky liquid passes through, from which starch gradually subsides; but on the sieve, when the water ceases to go through milky, there remains a soft, adherent, tenacious and elastic substance, which can be drawn out into long strings, has scarcely any color, taste or smell, and is scarcely diminished by washing either with hot or cold water. This substance is the *gluten of wheat*; and in cabbage and many vegetables there are compounds termed vegetable albumen. In peas, beans, and vetches, there abounds a substance termed legumin, in composition nearly identical with gluten and albumen. These are called the nitrogenous bodies of vegetable food, as in their chemical qualities they contain from 15 to 20, or more, per cent. of nitrogen, and are nearly identical in composition with the muscle, (lean meat,) of animals; the casein or curd of milk, and the albumen or white of eggs; and, from their solution in the blood, form the tissues—muscle—the actual organism.

2d. Bodies or portions of the food destitute of nitrogen, as the starch, sugar, gum, and woody fibre, as also the oil of seeds, nuts, &c. They consist chemically of carbon, oxygen and hydrogen—the two last, in the same proportions in which they form water. As the above named substances consist so largely of carbon, they are usually termed carbonaceous portions of food, and by their decomposition or digestion they afford the necessary heat to the animal body. When fed in quantities larger than needed for the keeping up of the required temperature of the system, the overplus, or a portion of it, goes directly to the fat, for it is well known that cattle, hogs, sheep and poultry can be fattened on potatoes, which largely abound in starch—but still those varieties of food which contain the most oil, like Indian corn, oil and cotton-seed cake, fatten animals quickest; and recently, in England, linseed and cod oil have been somewhat extensively fed to fattening cattle. A farmer there fed a pair of North Devon oxen upon linseed oil and barley straw cut into chaff and mixed with a pint of oil per day. "The said oxen were not only fat outside, but full of fat within."

"The organic food must then, in order to meet all the wants of the animal, contain starch, sugar or gum, fatty matter or oil, and nitrogenous compounds. These are all organic bodies. The first three are needed to furnish carbon, to be consumed in respiration for the purpose of keeping up the animal heat, and also for making fat in case of necessity. The oil is of value for forming fat directly, and the nitrogenous substance for the production of muscle, cartilage, &c."

Analyses clearly demonstrate that in a given weight of peas, beans or lentiles, there is more aliment or muscle-forming material than in an equal weight of any other vegetable food. But to make the most of the aliment of peas and beans, they require additional carbonaceous matter. Good fat pork is just the thing for this purpose. The Labrador fishermen and the lumbermen of Maine, understand this matter, and vegetable and animal physiology tells of the why and wherefore of it.

3d. There are the inorganic parts of food, the potash, soda, *phosphate of lime*, and others, which constitute the ash of the plants, grains, &c. In all animal food, phosphate of lime should be prominent, in order that the animal may form its bones strong and of full size. No other phosphate than that of lime, will answer the purpose of making bone. You can no more manufacture bones from phosphate of potash, soda, iron or magnesia, than you can gold dollars out of an old brass kettle. L. B.

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Profits and Diseases of Poultry.

Messrs. Editors—I herewith send you my first year's experience in keeping poultry—not for profit, but convenience and pleasure, though having an eye to the cost, as much for my own sake as for others. Having to buy every item of food, a strict account was kept.

Sept. 9, 1858, purchased 27 pullets and 2 cocks—a mongrel breed of Dorking, Shanghae, &c., costing $10.87. The hens began laying October 20th, and continued all winter, spring and summer, to September 9, 1859—(one year from time of purchase)—laid 3,302 eggs, besides raising 133 chicks out of 212 eggs, losing 8 chicks—also hatching 27 turkeys out of 48 eggs (bought,) of which 20 were raised.

The principal food was good wheat screenings, costing from $1 50 to $1.75 per 100 lbs., and scraps from the butcher's melting establishment, at $1 12½ per 100—each grown fowl costing one-third of a cent per day; less will raise a chick from egg to one year old The fowls are fed almost to repletion, believing they cannot elaborate eggs unless they have the material to do it. The result is as follows, viz:

	Dr.		Cr.
To 29 fowls	$10.87	By 3,302 eggs @ 2c	$66.04
" feed	35.35	By 29 old fowls, 50c	14.50
Total	$46.22	Total cost	80.54
			46.22
		Profit	$34.32

The old fowls are valued at fifty cents each, being larger and in better condition than when bought.

With proper care and management, one dollar profit per annum, can be realized on each pullet raised. The young cocks should be killed or sold when fit for broilers—they are unprofitable—if costing one-quarter cent per day, will cost twenty-five cents at one hundred days, which is nearly or quite as much as they will bring; indeed, without eggs, there would be no profit at all—hence, the importance of raising the *best* layers, irrespective of size, though large and well flavored with good laying qualities are desirable.

True, there are contingencies. Like all the animal creation they are mortal; disease and death is also their heritage; they require more attention than they usually receive, but will repay all care bestowed on them. This winter disease appeared among mine, and three died before I thought what to do. The first symptoms observed, eyelids swolen and closed with thick mucus. On examination, showed ulcerated or putrid sore throat. One, whose head, eyes, mouth and throat were almost a mass of corruption, (so filthy that I scarcely dared touch it,) was washed about the head and eyes with a solution of sugar of lead, and gave inwardly ten globules of mercury (Homœopathic) and shut it up alone in a warm coop. In two days gave same dose of pulsatilla, and in four days was apparently well, and is now in good condition. All showing similar symptoms receive the same treatment, thus far with equal success. C. L. N.

Bergen Pt., N. J.

Driving Bees—Bee-Hives, &c.

In the Country Gentleman of Jan. 5, I noticed the inquiry "S. H. S.," for a method of driving bees from one hive to another. He asks if it is possible? It is, and very easily done. The simplest mode which I am acquainted with, is to take the old hive a short distance from its usual place, and put an empty one instead. Having protected your hands and face in such a manner that they will not be able to sting you, then jar the hive—the bees will fly out, dart back to where the hive used to stand, enter the new one, and soon become domiciled in their new abode. This operation I think is sometimes very beneficial, especially when the comb has become old and dirty—it seems to have the power of rejuvenating the old swarm. When they have about all evacuated the old hive, it can be carried into a dark room or cellar, being careful to have a small hole through which a little light can penetrate—the remaining bees will fly to this, and thence find their way to the new home. This plan is a very good one for clearing box honey of bees.

Another plan is to invert the hive—set another one directly on top of it, adjusting it in such a manner that the bees cannot escape without getting into the new hive. Then breathe tobacco smoke into the bottom of the old one, gently tapping the hive at the same time—a few moments will suffice for the bees to clear the old hive. Care must be taken not to apply the fume too strongly, or it will make them so torpid and stupid that they will not stir, resisting all efforts to dislodge them. I think this is the reason why many fail in driving them from boxes with tobacco smoke—they are rendered stupid before they are aware of what ails them. Bees naturally have a strong antipathy to tobacco smoke, and will always get out of the way if a chance is given them.

Still another method I heard spoken of the other day. It does not differ materially from the first however. It is this—Cover the face, &c., to prevent stinging—then place a rope of good length around the top of the hive from which you wish to expel the bees—set it off the plank—place another instead—and then carefully place the one containing the bees on your back, holding it to its place by the rope. Then take a stroll out in the lots—a few turns will suffice to dislodge them. I should not prefer the last method for several reasons not worth mentioning.

My father keeps about 40 or 50 swarms of bees. The hive which he uses—got up by himself five or six years ago—is very well liked by those who have seen it, and used by a good many. It is different from any description that I have ever seen. Perhaps it would suit the ideas of some of your readers, and I will give a short description of it. The proportions of the hive are as follows: Height two feet—one foot square clear inside—space in top for box 9 inches high—leaving 14 inches space below the box and partition board for the bees to form comb in. Door in front, 20 inches, is put on 4 inches from the bottom. If put any nearer than that, the bees when hanging out, are apt to get on it, thus hindering the opening of the door. Ventilator in the back of the hive near the top. An auger hole is made through the partition board for the purpose of letting the bees into the boxes. A glass 9 by 12, is placed in the lower part in front, for the purpose of examining into the wellfare of the bees. He always planes and paints them.

The dress he has for the purpose of hiving the bees, is made of coarse book muslin or musqueto netting, or anything which will admit of a free circulation of air, and will prevent the bees from getting near his face. It should not be so close as to obstruct the sight. It is made something in the shape of a shirt, with sleeves, and reaches down well in the waist. The upper part is entire, with the exception of a hole of three or four inches in diameter. It is drawn on over a hat, the crown of the hat protruding outside. The brim of the hat keeps it clear from the face. This, with the addition of a pair of gloves which come well up the wrist, when they are well tied on, make a rig which costs but little, and one which any person, when they have them on, need have no fear of bees.

There are quite a number of bees kept in this section; but very little pains is taken to house them, however—are generally left out without any protection whatever during the winter. In the spring the colony comes out very much weakened. This I think is one cause of so many failures, together with carlessness in spring when they are hatching. There are exceptions to this rule however, some taking excellent care of them. Still bee-keeping here as an art is in its infancy.

Bees situated a mile from the lake, which is 2½ miles wide, often cross it for the purpose of getting honey. E. A. King.

Cayuga Co., N. Y.

Care of Wood-Lots and Preparation of Fuel.

The above named are home subjects, that have a direct bearing upon the interests and comforts of all classes of persons in these northern regions of the country, which are so entirely destitute of coal. And these subjects too, will bear "line upon line," and like Thanksgiving and Christmas, they should come round and be noticed at least once a year, by all the agricultural papers of the country.

The wholesale destruction of our forests since the general introduction of railroads among us, (there now being over 26,000 miles in operation in the United States,) is any thing but cheering to the interests and prospects of the future, or to those that are to succeed us. The question of late has been a thousand times repeated, "where are the people to obtain their fuel, timber, building materials, fencing stuff, &c., &c., if this reckless sweeping of our wood and timber lots is to continue?"—and continue it will, without reference to future consequences, just so long as the "almighty dollar," as Washington Irving termed it, retains its potency over man.

But of these matters it is not our intention to particularly write at this time, but rather to throw out a few hints and suggestions for the consideration of our readers on the management of wood lots, and the preparation of an ample supply of well seasoned fuel; an *item* in domestic affairs that adds so much to the comfort, peace, and well-being of every farmer's family.

In all cases where possible, the first snows of winter should be improved in getting up the year's supply of fire-wood. It is better to shoe sleds than to break paths through three feet snows and six feet drifts. Where the trees on a wood-lot are mostly of an old and large growth, it is better to cut for fuel such as are dead, or appear to be decaying, with dead tops, &c., rather than to take the thrifty growing and sound trees. In most sections of the older settled portions of the country, there will be a continual rise in the value of wood and timber land, and these ancient trees will ultimately come into requisition, and be much more valuable for other purposes than for wood. Therefore they should be scrupulously preserved; we should have some regard to the interests of those who are to succeed us, whether they are of our own kith and kin or not. If posterity has done nothing for us, we have something to do for it. Every owner of a wood-lot should manage it as carefully as he would if he had the assurance of living here through the colds of a coming thousand winters. Philanthropy and patriotism should prompt to this.

Upon a wood-lot where the trees have obtained a fair growth or size for fuel and timber, the owner perhaps will do as well to commence at one corner or end of the lot, and cut all clean as far as wanted for his yearly supply of wood, timber and lumber. The lot should be fenced, so as to keep cattle and sheep from browsing the sprouts and seedlings that may spring up. We think but few farmers, comparatively, are aware with what rapidity a new crop of trees will grow on good and moist soils, where a previous growth of trees has been removed, and the fire and cattle have been kept out. We have recently examined a small wood-lot from which the trees were removed about fifteen years ago. We presume, if all were cut clean, it would now yield nearly or quite twenty cords per acre, and it is worth two dollars per cord on the stump —in some other locations it would be worth five dollars per cord.

When the growth of trees are small and thick, as is frequently the case where a new growth has sprung up, after the removal of a previous growth of trees, it is frequently good economy for the farmer to obtain his fuel from the thinnings of this young growth. Thinning out where too thick, and cutting the stinted and most unthrifty. This will give more light, room, and thrift, to the remaining trees, and the decaying branches lopped off from the removed trees, with the decaying stumps and roots, will add greatly to the thrift and growth of the standing trees.

We have recently examined a wood and timber lot mostly covered with a thrifty growth of white and Norway pines, now about fifty years from the seed. The trees on a portion of the lot were thinned out about twenty-five years ago. This portion of the lot is now worth thirty-three per cent. more than the unthinned portion, in consequence of the larger growth of the trees, for boards and ranging timber; the wood thinned out at the time, amply paying for the labor.

During the past summer and autumn we made several excursions in various directions among the rural population of the country, and as we kept our eyes open during our jaunts, we had opportunity to witness all kinds of farm management, from that practiced by "Farmer Thrifty," down to that pursued by "Squire Slipshod."

At most of the farm-houses at which we called, we noticed ample supplies of fire-wood, suitably prepared for the stoves and neatly corded, in the wood-houses or sheds, where it could readily be obtained without exposure to the weather. Upon inquiry, we found in most cases that the wood was cut sled length, and at the same time drawn from the wood-lot, in early winter. In March and April, before the hurry of spring's work came on, it was cut or sawed and split into suitable billets, and put under cover, where it became well seasoned before wanted for use. Many of this class of farmers had a two years' supply of fuel on hand, and they are enrolled in the same company with Farmer Thrifty.

In some few instances we saw that farmers had drawn up a good supply of wood during the sledding season, and not suitably prepared it for use; it was thrown into a large pile, where it remained exposed to the weather from early spring till late in autumn. There must be lack of economy in such a process, for all the wood lying on and near the surface of the ground, must become mouldy, lifeless, and water-soaked. Perhaps these farmers did the best they could in this case. We do not wish to judge them harshly, neither shall we turn them over to the "Slipshod" class of farmers, but trust they will yet learn to do better as they grown older.

Occasionally we came in contact with well defined specimens of the Slipshod tribe of farmers. They put off getting up their wood so late into winter, and to them, the snow came so early and so unexpectedly deep, that they could not then think of jamming their cattle through the huge drifts; so the winter, as usual, passed off without a wood-pile at the door, and the standing trees remained for future growth, unscarred by the "woodman's axe." But these families have made out to struggle along, as usual, with what old rails, boards, and other trash the women-folks and children could pick up, aided somewhat by occasionally having a green, brushy-topped tree twitched from the pasture by the old skeleton horse. By these aids they have obtained fuel, to raise steam enough to do the cooking and washing after a fashion. But the final result of all such shiftlessness, is to make smoky houses, slipshod and scolding wives, late and half-cooked meals, saucy and unruly children, and the homes of all such anything but pleasant and happy.

Changing Pasture—Shade for Stock.

In regard to changing pastures of dairy cows, we recently copied (Co. Gent., Oct. 20, '59) the opinions of two extensive New-York dairymen, "that cows are more contented, and do better through the season, when not changed from one field to another, unless from a day to a night pasture," or, in other words, that they do best to range at will during the day over the whole pasturage of the farm. Although we have seen other opinions and remarks on the subject since, (some of which we condense below) we see no reason for modifying the opinion then expressed, that, "with a fully sufficient range this may be good policy, but we believe the grass will be more economically consumed, when occasional change of pastures is made." It may, too, be true of some variety of grass, and not of all. Clover, we are sure, and we think it is so with timothy, cannot be employed advantageously as pasture with constant feeding.

We find in the *Ohio Farmer* some report of a discussion by the members of the Ohio State Ag. Society, at their recent annual meeting, on this and cognate subjects. A large majority of the graziers present thought that stock should not be changed from one pasture to another; that if a farmer has one hundred acres of pasture, the division fences should be thrown down. Mr. Seymour, of Ross, said cattle would fatten better confined to one pasture. J. M. Trimble, of Highland, preferred one pasture, without change. Col. Spencer, of Geauga, said that for *cheese* there should be no change. It always diminishes the curd. Mr. Palmer, of the same county, thought a large range best. W. H. Ladd, of Jefferson, pastures all his stock in one field. Mr. Jones, of Delaware, said that in *a blue grass pasture*, a large range is best, but doubted about this in clover or timothy.

For increasing the milk, Mr. Trimble thought changing pastures an advantage. Col. Messenger, of Marion, said frequent changes are best for milk, but would have no change for making beef. Col. Alsdorff, of Licking, a grazier, keeping from forty to fifty head of cattle to feed, said part of his pastures were blue grass, and part of timothy and clover. He fed off the blue grass first in the spring, and then put his cattle on the timothy and clover when the latter begins to shoot. He sold his fat cattle in June and saved his blue grass for fall pasture.

The question of shade trees in pastures (first started by Hon. A B. Dickinson, Steuben Co., N. Y.,) was also discussed. Col. Kenrick, of Franklin, regarded shade trees in a pasture as a nuisance—the cattle would lie under them until drawn out by hunger. Mr. Seymour concurred in this view, and added that cattle grazed in the sun make better and more solid fat, which weighs more, and stands driving better. Flies annoy cattle more in the shade than in the sun. Messrs. Trimble and Messenger would have no shade trees in cattle pastures. All thought them necessary for sheep. On the other hand, Mr. Palmer, of Geauga, and Col. Alsdorff, looked on shade as a benefit. Mr. Taggert, of Wayne, though admitting that more beef could be made in the sun than with shade, would favor trees as more humane to animals. Thirteen head of cattle died by sunstroke in his vicinity last summer. Dr. Townshend said he believed in shade. The instincts of animals may be trusted, and should be supplied. Exercise diminishes the amount of butter, but increases the amount of cheese.

Some other matters brought out, we shall report at another time. We shall be pleased to give the views of our readers on the above topics—and especially upon the best method of feeding off clover and timothy, where these are mainly depended upon for pasturage, as in our grain-growing sections.

Cheap and Excellent Ink.

We like ink that is as black as midnight, and glossy as a raven's wing. Bad ink is a decided nuisance. There is scarcely anything more undesirable than to receive a long letter with bad spelling and worse penmanship, on another man's business; but the annoyance is greatly aggravated if written on dull blue paper with ink about the color of muddy water.

Good ink may often be had by paying a good price for it, say about fifty cents per quart; but after the manufacturer has got up his reputation, he is tempted to sell a cheap and miserable article The best way is for all to make their own ink, and save at least one thousand per cent., as ink is commonly sold at retail, between first cost and final price. But how shall we make it easily and cheaply? Thus:—Buy *extract of logwood*, which may be had for three cents an ounce, or cheaper by the quantity. Buy also, for three cents, an ounce of *bi-chromate of potash*. Do not make a mistake and get the simple chromate of potash. The former is orange red, the latter clear yellow. Now, take half an ounce of extract of logwood, and ten grains of bi-chromate of potash, and dissolve them in a quart of hot rain water. When cold, pour it into a glass bottle, and leave it uncorked for a week or two. Exposure to the air is indispensable. The ink is then made; and has cost five to ten minutes labor, and about three cents, besides the bottle. This ink is at first an intense steel blue, but becomes quite black. We have recently given this ink a fair trial, "and know whereof we affirm." So faras we know it is new.

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PRODUCTS OF GOOD COWS.

At the last exhibition of the Hampshire, Franklin and Hampden (Mass.) Ag. Society, nine milch cows were entered for prizes. We condense, from the Transactions of the Society, a portion of the statement furnished by the owners of the cows, relative to their products.

1. A. J. Lincoln, Northampton. Cow supposed to be grade Durham. Calved about the middle of March—during month of May, 1859, was fed on cut hay and six quarts corn meal and rye bran, equal parts, per day. She gave of milk during this month, 1178½ lbs., equal to 38 lbs. per day. June 1st, she was turned out to pasture, and no extra feed given—and for the month of June gave 1220½ lbs., equal to 40 2-3 lbs. per day. For seven successive days in June, viz., from 10th to 17th, she gave 287 lbs., or 41 lbs. per day. For the month of July, she gave 1130 lbs., equal to 36½ lbs. per day. For three months ending July 31st, she gave 3528½ lbs., equal to 38 1-3 lbs. per day. Milk was sold, and no butter made.

2. W. B. Hale, Northampton. Grade Durham cow, eight years old. Mr. H. bought her November 25, 1857, two weeks after calving. From this time till June 21, 1859, (when she again calved,) a period of 572 days, she gave 13,056 pounds 3 ounces of uncommonly rich milk, an average daily for the whole time (including 24 days in which she was dry) of 22 lbs. 13 oz., over nine beer quarts or eleven wine quarts. No butter was made—milk sold.

3. E. Fitts, Northampton. Cow seven-eighths Durham, 7 years old. Calved January 20, 1859. From 1st to the 10th June, she averaged 21½ quarts milk per day, weighing 53 lbs. Feed—the best of hay and 1 peck of roots per day.

From the 10th to the 20th of Sept., she averaged 35 lbs. per day—feed, poor pasture and 4 quarts of shorts per day. From the 10th to the 20th of Sept., was made from her milk 17½ lbs. of nice butter.

4. Alfred Clapp, Huntington. Cow, half-blood Alderney, 4 years old. She gave, on common pasture, from September 21 to 28, an average of 23 lbs. of milk per day, which produced an average of 1 lb. of butter to 15 lbs. of milk, under good circumstances, thus making 1½ lbs. butter per day.

5. T. E. Elliott, Southampton. Half-blood Hereford heifer, 3 years old. She came in the first time June 6, 1858, when two years and six days old, her milk averaging from 28 to 32½ lbs. per day for ten months, and making 1 lb. of butter per day on an average.

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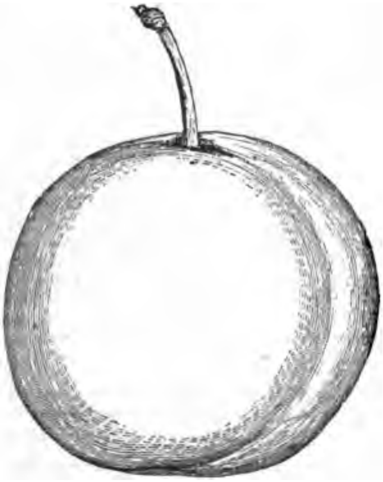
Chilblain Ointment.

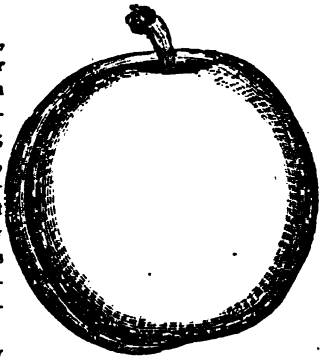
Messrs. Editors—I will give you a receipt for chilblains It is capital, I can assure you, and has *cured* a great many persons, both on my own farm and on other farms:

2 Quarts of Lard,
1 Pint of Turpentine,
½ Pound of Camphor.

R. H.



LUCOMBE'S NONSUCH.



NECTARINE.

A BASKET OF PLUMS.

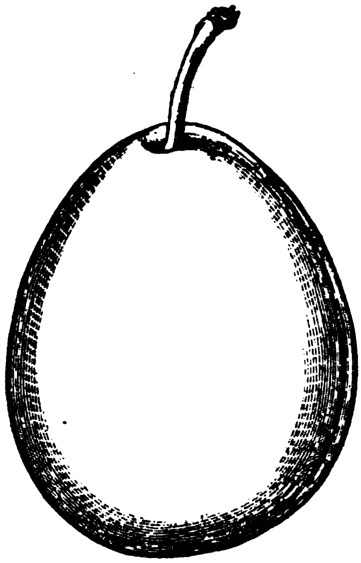
(Concluded from page 14.)

Lucombe's Nonsuch. — Large, nearly globular, suture distinct, color greenish yellow, marbled, or with broad attenuating stripes of yellowish orange and greenish yellow; stalk three-fourths of an inch long, in a considerable cavity; flesh moderately firm, greenish yellow, sweet when full ripe, juicy, "good or very good;" adheres to the stone. Shoots smooth. Compares favorably in quality with Imperial Gage. Tree a vigorous grower.

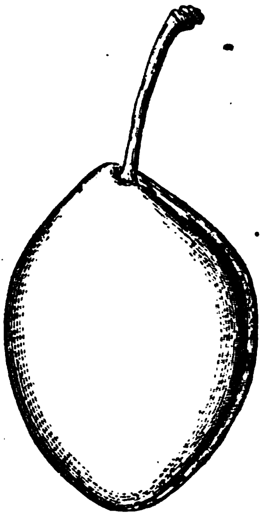
Nectarine.—Fruit large, nearly round, sometimes slightly approaching oblong or ovate, suture moderate; stem quite short, in a deep wide cavity; skin dull rich purple, with conspicuous russet specks; flesh dull brownish yellow, somewhat fibrous, juicy, with a sprightly, moderate, somewhat acid flavor—"good"—adheres partially to the stone.

Pond's Seedling, *of the English.*—Fruit of the largest size, exceedingly showy, often two and a quarter inches long and an inch and seven-eighths in diameter, obovate and suture small, distinct on one side, obscure on the other, accompanied on both sides by an obscure ridge; stem ¾ of an inch long, in a small cavity; color light red, flesh yellowish, somewhat fibrous, adhering firmly to the stone, sub-acid, of moderate flavor, "good." Shoots smooth — ripens middle or latter part of 9 mo. (Sept.) The most showy and brilliant of all plums—great grower and bearer—quality about equal to Yellow Egg.

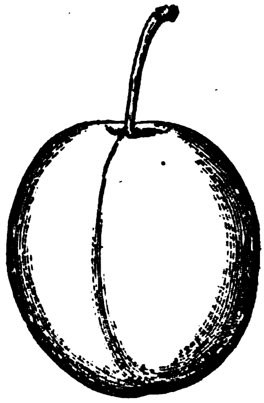
Peters' Yellow Gage.—Large, nearly oval, somewhat varying or irregular in form, stem ¾ of an inch long, set in a rather deep cavity, which is a little on one side of the plum; suture distinct, dividing the fruit in slightly unequal portions; color a rich greenish yellow, with some crimson dots towards the sun; flesh greenish yellow, rich, sweet, "very good."



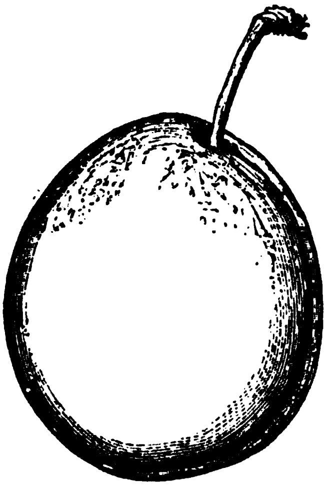
POND'S SEEDLING.



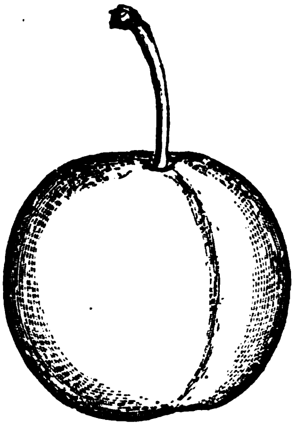
FELLENBERG.



PRINCE'S YELLOW GAGE.



PETER'S YELLOW GAGE.



PURPLE GAGE.

Fellenberg (*or Italian Prune.*)—Size medium, oval, rather pointed at the ends, suture small but distinct; color dark purple with a light blue bloom; stalk an inch long, scarcely sunk at the insertion; flesh greenish yellow, juicy, sweet, "good," approaching "very good," free from stone.

Prince's Yellow Gage.—Well known, and an excellent variety.

Purple Gage. — This excellent plum, under whose name a spurious sort has often been disseminated, is of full medium size, roundish, color, a dull rich purple, with russet dots and nettings; stalk an inch long, cavity slight, flesh greenish yellow, fine grained, juicy, sweet, "very good," if not "best," possessing much of the excellence of the Green Gage.

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"Do Good and Communicate."

Some kind friend occasionally writes us to this effect: "I had it in mind togive you a letter for publication the other day, but your columns seem always to be running over; so I concluded to take some other time."

It is a maxim almost too old to be quoted, that what may be done at any time is never done at all. The object with which we now write, is to show how the proverb may be made to apply here, and to invite still more general discussion from our readers.

I. Precisely when we have the most, is the time when there is most to suggest additional correspondence. If the most practical reader we have—whether experienced with the pen or not, would sit down the first convenient evening after his paper comes to hand, and take up any one article—if it seems to him wrong in its teachings, to combat them with his own experience, and, if right, to support them with additional facts—if, we say, some reader in every town and county would thus contribute something to the debate, upon whatever topic has chanced to interest him particularly—can we easily estimate the large additional mass of valuable facts which might accumulate?

II. There is no fear of overstocking our supplies—the best will keep until any unusual pressure is over, and keep much better, we may add, for having been actually written, mailed, read, labeled and pigeon-holed in our desk, than it will as a mere tissue of unrecorded events and arguments, which the first busy day may dislodge from the writer's memory.

III. There is another reason why when our columns are the fullest, we still have occasion to ask the voluntary communications of others. In the larger quantity obtained, not only can greater selection and condensation be advantageously employed; but if we overlook, amidst the pressure of our engagements, the propriety of inviting especial attention to subjects which are really most seasonable and important, those to whom these topics chance to occur of themselves, cannot favor us more than by at once entering upon their consideration. More than all, in such cases as this, please do not wait for an occasion when no one else seems to be writing.

IV. We do not go on to the suggestion of particular themes of discussion, because, as it appears to us, no number of this Journal can be made the subject of careful perusal without conveying suggestions fuller and more abundant than we could catalogue here. The true use of an Agricultural paper, as a contemporary lately remarked very justly—is not to dispense knowledge to a set of readers, who, "like young robins," are to open their mouths and take in all that is offered. On the contrary, *in leading them to think*, the very first thing about which they should call both discretion and experience into exercise, is this, "How far is what I read suited to my own circumstances?" And if they conclude in so doing, that the process of thought might advantageously be put into black and white, and result in the benefit of others, all we ask is that while the thoughts and facts are fresh in the mind, they may be at once written down, and sent to us to be set afloat in this fountain of ours, whose waters, gathered from so many sources, are again distributed into channels still much wider and more diverse.

V. Having thus briefly called attention to several points, on which much more perhaps might be profitably addded, it only remains to express our acknowledgments for the many favors already received since the New Year opened, and, in doing so, to remind our readers once again, that as their circle enlarges with each recurring year, the discussions to which they contribute are ever gathering in interest and importance. That each successive number we issue "should bear within itself the evidence that it is the product of the prolonged labor and careful thought of hard-working American farmers, scattered through every State and Territory of the country," we have already stated to be an object which we keep constantly in view; and we hope that in the one cause of a common Agricultural improvement, if in no other, we can all unite cheerfully and heartily, whatever may be the district in which we live.

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MAKING PORK—WINTERING PIGS.

Mr. Taggert, of Wayne Co., O., said, at the recent State Society discussions, as reported in the O. Farmer, that he was now engaged in raising pork—that he puts corn worth 40 cents into pork worth $5, and makes money. He is not in favor of keeping hogs long to make them weigh 300 pounds—would have such as mature early. In May rings his pigs, and turns them into a clover field, giving them a little corn. In September, when the corn begins to harden, cuts up corn and throws to them three times a day—thinks there is more value then, in the corn and stalk, than afterwards. One bushel of corn in September will fatten hogs more than one and a half bushels in December. He kills his pork the middle of November.

Mr. T. says that he saves one-third of the feed in winter by providing a sleeping and dining room for his hogs, both warm and clean. He would not crowd with feed—gives them corn meal scalded. We think the importance of comfortable pens can scarcely be overestimated.

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"Jennie" wishes to know how to make "Ice Cream" and "Frosting." If she will try the following receipes I think she will like them:

Ice Cream.

Put 2 quarts of milk on the fire and scald, adding 4 sheets of isinglass broken in small pieces—also 1 tablespoonful of flour blended with a little cold milk, when the isinglass is dissolved—strain right on to 3 cups of sugar—flavor to taste—add 2 quarts of sweet cream, and freeze.

If "Jennie" lives where milk and cream are plenty, I would ask her to try the above. I have used one of "Masser's Five Minute Freezers," for the last two years, and think they are the best in use.

Soyer's Royal Icing.

Is the best I know of. Have ready one pound of fine white sugar—put it in a basin with the white of 3 eggs—beat well together with a wooden spoon, until it hangs in flakes. The juice of half a lemon, or a few drops of the extract, will flavor it nicely.

Table Jelly.

Eight sheets of isinglass—8 tumblers of water—1½ pounds of sugar—2 sticks of cinnamon—same of mace—3 lemons cut in slices and the seeds taken out—the whites of 3 eggs well beaten. Let it all soak half an hour; then boil hard for ten minutes, and strain through a hair sieve into moulds.

An Old Subscriber.

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Germination of Seeds.

Loudon gives the following table—from which it would appear that the grasses are most rapid in germination; then perhaps cruciform plants; then leguminous; then labiate; then umbelliferous; and lastly rosaceous; although there are many exceptions to this order.

Wheat, millet.	1	day	Orache,	8	days.
Spinach, Beans, mustard,	8	"	Purslane,	9	"
Lettuce,	4	"	Cabbage,	10	"
Melon, cucumber, cress,	5	"	Parsley,	40	"
Radish, beet,	6	"	Almond, chestnut, peach,	1	year.
Barley,	7	"	Rose, Hawthorn, filbert,	2	"

[Reported for the Country Gentleman and Cultivator.]

Fruit Grower's Society of Western New-York.

The winter meeting, held at Rochester on the 4th and 5th of the present month, was as usual largely attended, a large portion of the counties west of Syracuse being represented. The exhibition of fruit was excellent, containing several large collections of apples, but the most remarkable part of the exhibition was the superb display of *winter pears*, embracing more than fifty varieties, filling as many dishes, and most of them specimens of admirable growth, all from Ellwanger & Barry.

Discussions on Fruits and Fruit Culture.

The first question taken up was, "Is the dwarf pear a humbug?" A. Pinney, of Clarkson, had cultivated it with great success, and especially the Louise Bonne of Jersey, which had outborne all other sorts. W. P. Townsend, of Lockport, believed, from 25 years experience, that this sort would bear three times as much as any other pear—he would plant dwarfs rather than standards, placing them near together—and would cultivate the *whole surface*, and keep it thoroughly stirred, as often as at least once in two weeks. The best sorts as dwarfs he thought were, Louise Bonne of Jersey, Virgalieu, Angouleme, Beurre Diel, Winkfield, and for summer, the Doyenne d'Eta. The Flemish Beauty was also a fine grower. C. L. Hoag, of Lockport, found the Flemish Beauty to grow better than any other sort, after it became once established. Prof. Coppock, of Buffalo, differed on one point—he thought the Vicar of Winkfield would bear twice as much as any other sort.

G. Ellwanger, of Rochester, named the following sorts as never succeeding on the quince, namely, Bosc, Autumn Paradise, Sheldon, and Dix. There are several others that succeed imperfectly. But all the *fruit*, borne on dwarf trees, is invariably finer than when grown on pear stocks. H. T. Brooks thought that they were not the sort to send out among *farmers*, for no sort should be recommended to them but such as would bear "grief" well, for they would not take care of them, and although he would set at the feet of the Rochester nurserymen, yet he would presume to advise them, in making up lists for farmers, to put in very few dwarf pears. W. B. Smith, of Syracuse, replied by suggesting the same cautious course in relation to recommending improved breeds of cattle to farmers. S. H. Ainsworth said he had formerly spoken and written against dwarf pears—but he had found that some sorts bore more heavily, as well as better fruit, on quince. He had two old trees of Louise Bonne of Jersey, one a dwarf, and the other a standard; the fruit on the former was always double in size, and of superior quality. With other sorts the difference was less obvious. The Vicar of Winkfield was fine and valuable on quince—on pear "worth nothing." The whole secret in raising dwarfs, is first to get the right sorts (which are few,) and then give thorough cultivation. The trees must be properly pruned, and cultivated *broadcast*, as often as once a week—of course by horse power. With this treatment, success will be certain. He had failed at first by using bad stock—on the common quince, they soon failed—seedlings from the common quince were perfectly worthless. The Angers quince was the only sort that he had succeeded with. In answer to a question, he said he erred in sending his pears to Boston market, where he received but ten dollars per barrel, while they sold freely at all times at New-York, for at least fifteen dollars per barrel. He finds the Winter Nelis to crack badly by the side of Virgalieus that never crack with him. G. Ellwanger thought the Fontenay stock better than the Angers—the latter, indeed, grows faster at first, but the Fontenay afterwards expands and makes a better union with the pear. He said he had never found the Angouleme of any value on the pear—which remark was confirmed by S. H. Ainsworth. T. G. Yeomans stated that it is important to have *well grown* specimens of the Angouleme—that first and second size are generally excellent in quality, but small ones never but only as good to eat as a raw potato. A. Pinney had never found any good, but fully grown ones.

T. G. Yeomans stated that he had 140 trees of the Angouleme on one-third of an acre—they yielded about 30 barrels—of these, five barrels were blown off by wind, and were sold from six to eighteen dollars per barrel. But the best six barrels sold for *one hundred and fifty-six dollars*, or $26 per barrel. The whole third acre yielded him five hundred dollars. The trees are planted ten feet apart, cultivated by horses, at much less expense than cultivating potatoes. The best barrel was filled with 166 pears. He has already had applications for his next year's crop. The barrels hold two and a half bushels. He places the pears in carefully, till the weight of one person is required to press them enough to place the head in, after having covered them at the top with cotton batting. G. Ellwanger stated that the fruit of the Louise Bonne of Jersey, he had sent to market at New-York, sold from sixteen to twenty dollars per barrel—and from the experiments already made, he thought that eight or ten year trees, with good cultivation, would safely yield on an average per annum, at the rate of over a thousand dollars per acre—and that this variety would produce at least twice as much money from the same land as any other sort.

Culture of the Grape.

H. N. Langworthy remarked that of the amount of fruit sent to market, the Isabella had greatly exceeded all others—he alluded to the importance of quickly testing the many new sorts, and inquired in relation to the practicability of doing this by grafting. C. P. Bissell said that grafting was difficult, but he recommended more attention to inarching for this purpose. He thought that vines propagated in pots, (which some other members thought tardy in bearing,) would soon furnish clusters of fruit—he had had them the second year—and C. L. Hoag stated similar results. G. Ellwanger said that he had found no difficulty whatever in grafting, doing the work in winter within doors by the cleft-grafting mode—and they generally bear the second year. He had known them to grow 20 or 30 feet the same year. S. H. Ainsworth had successfully practiced grafting by taking up early in spring two-year roots, and they had grown 30 feet the same year. Strong ligatures were required. When set out, the place of union must be below the surface of the soil. L. B. Langworthy said he had found no difficulty in grafting a vine, even as large as one's arm, provided the grafts were kept cold and dormant, till after the leaves were expanded, and then cleft-grafting in the usual way, taking care to cover the work three or four inches below the surface of the soil.

Comparative Profits on Fruits.

The comparative merits of *apples*, *pears* and *small fruits*, *for market*, by skillful cultivators, occcupied a considerable share of attention. B. Barry said the proper estimate of their merits would depend greatly on circumstances. Near a city, small fruits would doubtless be most profitable. For distant marketing, by barrelling up the fruit, larger and longer keeping fruits will be best. In some places the soil may be best for *pears*—in another *peaches* may be most remunerative—in others again, apples may be best. Apples, if good, always have a ready sale. In Niagara county, the estimated amount sold was half a million of dollars worth. Where the soil is right, pears promise the highest profit—notwithstanding that terrible malady the fire blight, and the various accidents to which this tree is peculiarly liable. He thought the pear promised higher remuneration to skillful cultivators on proper soils, than anything else. For farmers the apple promises best. Some who had but four or five acres of good orchard, of the best winter apples, had realized more from this small area, than from all the rest of their farms. The crop fails less frequently than some of the most common farm crops—and from the fact that in large portions of the country elsewhere good apples could not be raised, he thought the market would not be soon overstocked. In answer to a question, he said the pear was a more certain crop than the apple—indeed it bore every year without exception—and by keeping a quantity of trees on hand to replace losses by the fire-blight, he does not apprehend much trouble under good management of this tree.

W. P. Townsend of Lockport, said he had Baldwin apple trees ten years planted, that yielded seven barrels of fruit at a crop. Pears had never yielded so great a crop, but a greater value in market. He would never set out standard pear trees for profit, but always dwarfs. W. B. Smith of Syracuse, was satisfied that for the first ten years, from an equal area, more fruit could be raised from pear trees than from apples, and alluded to the constantly increasing price of market pears. In answer to a question, he said that pears could be raised for a dollar a bushel, if apples could be.

H. T. Brooks of Wyoming county, strongly recommended the apple for cultivation by farmers. A neighbor had three Baldwin trees that produced six to eight barrels each, and being very fine, sold them at three dollars per barrel. He was confident that one acre of good orchard would yield more than any ten acres with grain crops.

S. H. Ainsworth stated one prominent advantage possessed by the pear. The trees, if properly cultivated, never failed in a single year of producing good crops; while the apple does not afford a good crop only about one-third of the seasons. He was strongly in favor of *standard* pears—had found the young trees on an average, to bear a bushel of fruit sooner than apple trees set out at the same time. And as there might be 160 trees per acre, and the crop more certain, they were vastly more profitable. They need, of course, good cultivation—but this need not cost so much as the yearly cultivation of grain.

On the subject of the marketing of pears. P. Barry remarked that in offering winter pears for sale, more than triple the price might be obtained by the grower attending to the proper ripening, and forwarding them to the dealers a few days before full maturity. Doubtless when they become more abundant, houses would be fitted up in the cities where this could be done on a large scale, with great perfection.

Bearing Years of the Peach.

T. G. Yeomans of Walworth, Wayne Co., a very successful cultivator of the peach, had known but two entire failures of the crop in 30 years, and only two or three partial failures. He thought the great and first requisite was to have the ground *dry*. He seldom prunes until they have borne a crop. He then takes a saw or pruning shears, and cuts all the longer branches, which greatly invigorates the rest, and increases the value and quality of the crop. Five minutes at each tree is enough. It is done early in spring. Cutting off yearly only a portion of the previous summer's growth he has found too troublesome and laborious.

W. P. Townsend of Lockport, said, along the borders of Lake Ontario was the best locality—he had known the thermometer to be six below zero at Lockport, and seven above at the lake at the same time.

The President (B. Hodge,) stated that under ordinary circumstances, when the thermometer sinks lower than 12° below zero, the crop is destroyed; but there are exceptions, varying with the condition of the tree and the subsequent weather. Sometimes the temperature had sunk to 16° or even 18° below zero, and had left a partial crop.

Several members urged the importance of shortening back the branches, not by cutting the yearly growth, but occasionally the larger limbs—not at the center of the tree, but out nearer the extremities.

Preparing Ground for Orchards.

Deep loosening of the earth with the subsoil plow or double Michigan was generally recommended. When the subsoil is fertile, the use of the double Michigan, which throws the bottom of the furrow to the top, was regarded best—otherwise the common subsoil plow is to be preferred, leaving the subsoil loosened at the bottom. T. G. Yeomans considered draining of first importance—much land that is generally regarded as not requiring it, he had found greatly improved. In some cases, it had proved profitable to lay the tile once in every 20 feet. In undrained soil, he had found the small roots of the trees to extend downwards but a few inches; but in well drained land, the roots had gone down to the full depth of the drains. He had never found the feared evil of roots choking the tile.

P. Barry said that the result of his experiments proved that scarcely any ground could be found that did not need draining. He would tile-drain all land for orchards—next plow deep,—as deep as practicable, and follow in the furrow with a four-horse subsoil plow. He would not plant trees near the drains, but intermediate between them, and then the downward roots would not choke them. He discouraged the use of manure at the time of planting—stating that thousands of trees were yearly killed by placing fresh manure near the roots. The manure will be more useful applied to the surface and worked in, some years afterwards. During the summer, the best mulching is to keep the soil constantly mellow, and in winter old straw or manure. Working manure into the surface of heavy or clayey soils, served to keep it loose and moist.

T. G. Yeomans stated that the proper *distance* for planting apple trees in orchards is about 40 feet, especially if the land is rich and deeply plowed. If only two rods apart, the branches will touch each other. He thought that the extremes should be avoided of low heads and very high ones. Some trees of Baldwin and R. I. Greening, if trimmed six feet high, when heavily loaded would have branches nearly touching the ground. [Would it not be best in pruning, to remove those low branches, and leave such only as have a more ascending position.—*Eds.*] These sorts he would train to much higher heads than the Northern Spy, which is very upright in form. P. Barry differed from his friend Yeomans, and would prefer low heads to trees. The severe winters and hot summers seem to require the protection which low heads afford; and the objection that such trees impede cultivation, he answered by saying that they did not require cultivation very near the tree when the ground is shaded by them, the roots extending a long distance beyond this limit.

The subject of the mode of digging trees from the nursery now attracted considerable attention; and in answer to a question, "if it is ever pardonable in nurserymen to mutilate the roots," a member said he would not like to say it is "unpardonable," but if he did, he would be only telling the truth—for "if there is any sin that nurserymen will have to answer for in this world and the next, it is the remorseless mutilation of the roots of trees."

Proper Age for Setting out Young Trees.

The president, (B. Hodge,) said he was once a nurseryman, and when he recommended to purchasers small and young trees, they thought it was because he was interested in selling them. He had now ceased to be a nurseryman, and had planted orchards largely, and was only confirmed in his previous opinion. He would greatly prefer an apple tree only five or six feet high to any larger,—would never set out a cherry tree over two years of age, and preferred a dwarf pear of the same age. He cited instances where large and small trees were set out side by side some years since: the latter were now much the finest. Judge Langworthy had witnessed the same results.

The Borer.

O. Chapin of Bloomfield, had been much annoyed by this insect, but had succeeded after losing many trees, in clearing his orchard, by employing a man to examine his trees twice a year, in May or June, and in September. The second year but few could be found, and one man would then go over twenty acres of orchard in a day. He used a jack-knife and a flexible wire to destroy them by punching in the hole. He cleared his peach trees in the same way, the knife only being required.

Many other interesting facts were stated during the discussions, of which our limits preclude the statement, and the Society voted to hold its next or summer meeting at Buffalo.

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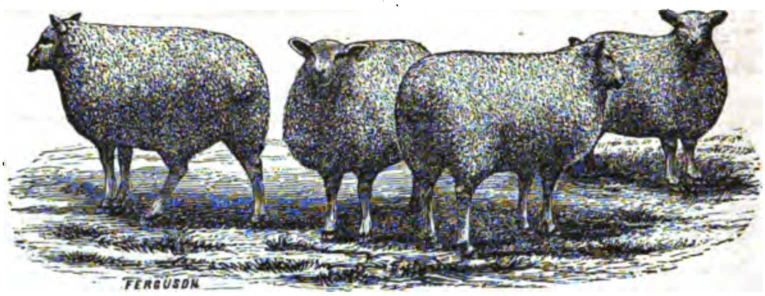
It has been computed that there are eight hundred millions in gold and jewels at the bottom of the sea on the rout between England and India.



LEICESTER SHEEP—Late the property of Jurian Winne, Bethlehem, Albany Co., N. Y

Mr. Winne has found the Leicester Sheep so well suited to feeding purposes, that he has been improving and enlarging his flock from year to year, and aside from the breeding animals, is this winter engaged in fattening over 500 for the butcher. He began by purchasing the entire flock of Mr. Shaw of Talbot St., C. W., from which he selected the best females and put with them a ram obtained from Hungerford, Brodie & Converse, of Jefferson Co. His next cross was obtained by means of a ram from the flock of Mr. John Stewart, Sr., of Orford, C. W., who has been engaged for 17 years as a breeder of Leicesters, and been quite successful as a prize-taker wherever he has shown. The next addition to Mr. Winne's flock was the purchase from Patrick, Brodie & Hungerford, of a ram and two ewes bred from their importation of 1856 or 1857, and, lastly, his first choice out of 13 yearling rams bred by Mr. John Snell of Brampton, C. W. The last named animal took the first prize at the State Fair last October in this city. His weight at about 17 months old, was 285 lbs.

The engraving is executed from a photograph, and represents the three ewes and a lamb purchased from Mr. Winne a few weeks since, by Mr. Edward Frisbie of California, where they will doubtless be of good service and give ample satisfaction.

Fitting Soil for Grain—Harrows, &c.

1. What is the best implement for fitting fall-plowed land for sowing in the spring? Our common harrows do not stir up the land deep enough.
2. What is the practice in fitting land for drilling in the seed, i. e., wheat, &c.? Does it require harrowing previously?
3. Is it advisable to roll land sowed with a drill as well as that sown broadcast?
4. Will the "Shares" harrow fit land which has been plowed in the fall as well as the steel tooth cultivator? C. B. D. Greenlake, Wis.

The best implement for pulvering in spring, land plowed in fall, depends upon the condition of the soil. If *stubble* has been plowed in autumn, leaving a clean surface, the gang-plow is best, especially if the land is heavy, and has become much hardened by lying unstirred so long. It will break up and pulverize the surface three or four inches down, much more efficiently than Shares' harrow, and more completely than the steel tooth cultivator. But on inverted sod, the gang-plow or cultivator will be apt to bear up much of the sod, and here Shares' harrow will be far the best. This is especially the case if the sod has been lapped. Shares' harrow never tears up the sod, but presses it down. If plowed very deep, and the sod laid flat, the gang plow would perhaps do well after the sod had settled all winter.

On heavy or clayey soils, that were plowed in autumn, the surface has usually become hardened so much by spring, that Shares' harrow is hardly efficient enough; but on spring-plowed sod, or on lighter soils, it is an admirable pulverizer. On the other hand, there is scarcely any soil too hard for the gang-plow, if there are no weeds or vegetable growth upon he surface.

In order to use the drill to best advantage, the land should be previously harrowed. It is not necessary to roll it, unless the soil should be very dry, and it is desired to have a smooth surface.

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Potatoes and Ruta Bagas.—Mr. H. G. Patten, Duquesne Farm, Butler county, Pa., informs the *Country Gentleman*, that he raised the past season on seven square rods of ground, thirty bushels of potatoes and twelve and a half bushels of ruta bagas, the latter being planted where the potatoes failed to come up; also, that on one-seventh of an acre he raised one hundred and ten bushels ruta bagas, some of them weighing four to six pounds each.

The Large or Peavine Clover.

A correspondent of the *Country Gentleman*, (E. A. King, of Cayuga county, N. Y.,) after alluding to the partial failure of the grass crop the past season, thus alludes to this clover:

"Farmers who seeded with the larger kind of clover, were exceedingly well paid. The season was very favorable for this variety. It stands an early drouth better than any kind of grass. The smaller kind was ready to cut when the larger was green and growing finely. It thus received the benefits of the July rains, and got a fine growth. From a lot of five acres we cut this season 12 tons of as fine hay as a person could wish for. The lot was what is termed Lake land, of a clayey soil. If we had sown the smaller kind instead, we would probably have got about 3 tons. The greatest objection which farmers have to this clover, is its aptness to grow too large, and then fall before fit to cut. This I think can be remedied by increasing the quantity of seed; it will then grow thick on the ground, and will not grow so tall, and therefore will not be so apt to fall. Our stock eat it very readily. To my mind it would be just the thing to raise for the purpose of plowing under."

I notice an inquiry about Peavine clover by J. A Lawton. I am of opinion that it is the variety known here as the German clover. It is sown largely in this county on the thin lands, with timothy. It is too large a growth for our limestone lands, and it grows too long and falls down, and is very hard to mow, but it produces double the quantity of hay. Long and rough as it is, it is eaten clean by cattle and horses, and is easily cured, as it is made after grain cutting; and for pasture exceeds the smaller variety, as cattle will graze on it when loose, where both kinds are sown in the same field. The seed can be had at our warehouses. If any of my brother farmers wish I will attend to having it forwarded to them if application be made soon. W. H. Woodburn. *Newville, Cumberland Co., Pa.*

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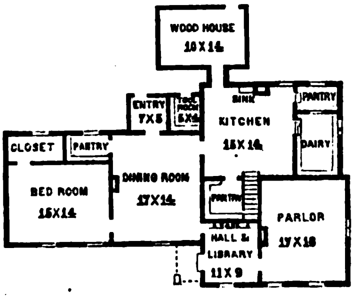
Stock Sales.—We learn that James O. Sheldon, Esq., of White Spring Farm, near Geneva, has recently sold a fine red and white bull calf, to Mr. Franklin Fay, of Brocton, Chautauqua Co., said to be a very promising animal—out of "Christabel," by "The Duke of Gloster," (11382,) and we hope it will be of great service to the stock in that section of the State.

Rural Architecture.

PLAN OF A HOUSE.

Eds. Co. Gent.—Enclosed I send you a plan of my house, which I have just completed. You are at liberty to publish the same. The only merits it has, are that it is convenient and comfortable, and the plan may be of service to some of your subscribers who have to build as I did, by piece meal. The first part, consisting of a parlor, &c., (a story and a half,) was built some years ago, the kitchen afterwards added, and now the wing, consisting of bed-room, &c. The up-stairs is divided into two bed-rooms and closets. The ground plan will speak for itself. The dairy is sunk about two feet, and has a brick floor. The house is kept warm by three stoves. A. Francis.



Ground Plan of House in Udimore Park.

This is a good and convenient plan—but would be improved for most occupants, if the pantry immediately in the rear of the hall were removed, and the hall and library made to occupy the whole, as there are already two other pantries. This alteration would also allow a longer and easier flight of steps; the stairs are now too short and steep. This house has more exterior wall than a more square and compact building; but such a form is necessarily the result of repeated additions—which many occupants find it necessary to make. Such a form is better also, for lighting and ventilation.

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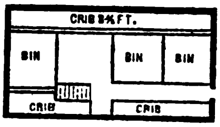
PLAN OF A CORN BARN.

Messrs. L. Tucker & Son—I have long been a reader of The Cultivator, as I was raised on a farm, and during my minority I generally read it as regularly as it came, and many are the useful hints I have gleaned from its pages. In the spring of 1855, I began to work for myself on this farm, and I have no desire ever to change my residence. The improvements I make, I intend to use and enjoy—hence I endeavor to erect permanent buildings and *under drains*, notwithstanding the assertions of so many that "ditching does not pay."

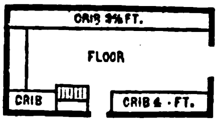
Barnes' Corn-House.

I have been building a *corn-house*, (the plan entirely my own,) and herewith is the plan. If you think favorably of it, use it as you think best. The only objection I have to it, is its *cost*, but I think that is more than repaid by convenience.

It stands on the side of a hill, on a foundation six and a half feet high, the floor to which is paved, and in this room, divided into three pens, I fat my hogs.



Lower Floor.



Upper Floor.

The frame is 20 by 40 feet, with posts 14 feet high, and there are five bents, making sleepers and joists 10 ft. long. I drive into it from the top of the hill, so that I unload my corn on the upper floor, (the floor with the beams;) this makes but little labor to put away the corn, as the cribs extend the whole length, and from sills to rafters, and it is a saving of room, as the space between the cribs on the lower floor gives me three large bins, beside a threshing floor. The bins are filled through trap-doors in the upper floor. The cribs are made by bolting studs to the joists, and the bins are made by nailing boards to other studs, thus leaving six or eight inches between cribs and bins, for the circulation of the air and cats, the plank of the upper floor being even with the joists, and *not* fitted to the studs.

At a short distance the building looks as if it were clapboarded, the slats being put on horizontally, being first beveled an inch on each edge, and then placed half an inch apart, so each laps the other a half inch. It cost about $400, including painting, &c.

Onondaga Co., N. Y. George Barnes.

KEEP AN ACCOUNT WITH YOUR FARM

Messrs. Eds.—Every evening during the past "working season," I have "posted up" a record of the labors of the day, giving my best estimate of their money value to each item of work, and to every thing used on the farm. As each crop was committed to the earth, I gave it an appropriate heading and transferred to its page in my book, the items of labor, seed, manure, &c., belonging thereto, and since harvest have "closed the account" with the several crops, or brought them so that I can see very nearly their cost and value. I find this a very convenient as well as economical course of procedure. In any other business it would be a waste of words to argue in its favor, for men seldom engage in other operations, even of trifling extent, without keeping an account of outgo and income. Why should not the farmer do so? There is no good reason, and the amount of time and thought it requires cannot be better employed in furthering the success of the enterprise in which he has engaged.

No particular system of accounts would suit all minds and circumstances, so I will not offer mine, at least as long as I see so many chances of systematizing and improving it. But I would urge every farmer to keep an account with his farm, so as to be able at the close of the season to "strike the balance," showing, not by guess-work, but in pounds and bushels, and dollars and cents, the profit or loss of the business of the year. One cannot tell how he stands with the world, how his plans have resulted, or how each crop and animal has repaid the outlay of production, without such account, with any accuracy or detail. He may be losing his labor and money on that to which his chief attention is devoted, while a good profit is returned on some minor product, which he thinks of little consequence. A statement of capital invested, with the expenses of growth and culture, and the receipts or return from the products, would at once decide the true policy of the farmer—his profits and losses, and from whence they arise.

No one who has not pursued this course has any idea of its importance. Now is a favorable time to commence it, and I can assure those who will give farm accounts a thorough trial, that "the figures" will furnish them many a valuable lesson, and give many a hint by which they can make or save in after years. They will serve as sharp reminders of the folly of attempting too much, or of leaving the finishing touch undone, and show you from what arose the comfortable satisfaction of pocketing the profits of your well-ordered labors. B. F.

FIELD CULTURE OF THE ONION.

An Ohio correspondent of the *Country Gentleman* and *Cultivator*, having asked for a "good article" on the culture of the onion, we applied to the Hon. JOHN. W. PROCTOR of Essex county, Mass., who has kindly furnished us the following, which we think answers our correspondent's requirements:

MESSRS. TUCKER & SON—I am most happy to appropriate a part of this memorable day, in answering your inquiries about the culture of the ONION.

You are right in supposing this culture to be extensively carried on in this vicinity. Until within the last three years, there have been no crops grown that paid so well, and even the last year, there were many acres that came within my observation, that yielded a net product of one hundred dollars and more. This, when it is considered that a laboring man, with the aid of his own family, boys and girls, can conveniently take care of five acres and more, will prove this to be no mean business, although the odor thereof may not be of the most agreeable character.

Success in this culture demands the most persevering industry and watchful care. No lazy man can succeed in it. Any land that will yield a good crop of *Indian corn*—say fifty bushels to the acre—can be made to produce onions. There are several points in the culture essential to be regarded.

1. The soil must be thoroughly prepared. Nothing less than the best of garden culture will fit it for growing the onion. Although the plant matures chiefly on the surface, still its delicate fibres penetrate to the depth of a foot or more, in search of sustenance and moisture; and therefore every facility to aid their ready penetration should be afforded—not only aid to penetrate, but vigilance to preserve from harm. Nothing can be more injurious to the growth of the onion, than the rude fracture of these fibres. Hence weeds should have no place on onion grounds. I have frequently known a loss of full half the crop by suffering them to remain a week too long without eradicating the weeds. When the injury is once done, it cannot be repaired. The delicate sensitiveness of the onion admits no atonement for a wanton injury.

A good crop may not be expected without unremitted vigilance and care. Care from the beginning to the end—care in the preparation of the ground—care in the selection and growing of the seeds—care in depositing—care in eradicating the weeds—care in securing the crop, and care in taking it to the market, under circumstances the most favorable.

First and foremost, it is necessary to be vigilant in planting the seed *early*. Those who are *up and doing*, are sure to find their reward in growing the onion. There are so many embarrassments in the way of their successful growth, in this cold and changeable climate, that no fair day after April commences, should be permitted to pass without something being done on the field for onions, either in fitting the ground, fining the manure, or in distributing it upon the surface, so that it will not be in the way of the even distribution of the seed. The seed is distributed by machines, in rows fourteen inches apart, as straight as they can be made, to facilitate the safe movement of the onion weeder, which passes between the rows so guaged as to cut the weeds without disturbing the plants. Whatever weeds remain uncut, are carefully removed by the fingers of boys or girls, who pass on their knees between the rows. No one who is afraid of soiling their knees or their fingers, need engage in the culture of the onion. Nothing short of a close embrace will command the sympathy or affection of this plant.

I have spoken of thorough manuring, and rarely have I known a crop to be injured by a too free application of manure. Ordinarily, *six*, *eight* or *ten* cords of good, well fined manure, is applied annually to each acre, and such application I have known successively for twenty years. Unlike most other crops, the onion continues to grow well after itself for many years in succession. I know no limit in this respect.

Any good manure is good for onins. None better than that made in the barn-yard, where stock is generously fed, and where the shovel is faithfully used in fining it. Fining of the manure and pulverization of the soil are essential prerequisites to the growing of the onion.

So much for the growing. There is more to be said about the harvesting and marketing, which can better be done on another occasion. J. W. PROCTOR. *Dec.* 22.

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RAISING THORNS FROM SEED.

I observe in the Co. Gent., an inquiry as to the best method of raising thorn seedlings. Although the answering is referred to another person, I have concluded to give an account of the methods I have used for years past, that have uniformly been successful.

For the Cockspur thorn, *Cratægus crus galli*, when the berries or haws are gathered, mix with them twice the quantity of sand; put the whole in boxes without top or bottom in the open air; let them remain in that state till the succeeding autumn, (about one year;) then riddle the sand from them, tread or roll the berries, to separate the seeds from the cover which will then be much decayed. Make a good seed-bed for them, saving two inches of the top of the bed to cover the seed. Then sow broadcast, and cover with the earth kept for the purpose. They will come up the following spring.

I have also succeeded well by crushing the berries immediately when gathered, being careful not to crush the seeds—then sowing them as described above, and also with them, other seeds expected to come up a year sooner, and to be taken away. I used generally the Honey Locust, which grew and were drawn out the succeeding autumn, and the spring following the Thorns came up well.

These methods will do well for the following kinds, viz., English hawthorn and the Dotted thorn, *oxyacantha* and *punctata*, but for the Newcastle thorn, C. CORDATA, it is necessary to plant immediately when gathered, (crushed and mixed with sand as above, to separate the seeds,) or else to plant very early in the ensuing spring, as the seeds come up early the first year, generally so early that it is proper to provide a place in the fall in proper order to sow them in.

With the Scarlet thorn, the *Coccinea*, I have had little experience of late years; but judge that as the seeds are less, and not protected by so hard a cover as the Cockspur, it will be safest to put them in the ground when gathered. A. W. CORSON. *Plymouth Meeting, Pa.*

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Farm Accounts-Profit on a Corn Crop.

How soon the Mechanic, the Merchant, the Manufacturer—in short every business man, would get entangled in interminable difficulties did they not have a system of book-keeping by which they could at any time ascertain the true state of their business operations. Now if these classes are unable to proceed without it, how much more necessary for the Farmer to practice some system of keeping accounts with a business a good deal more complicated than either; yet how few do it. Ask a mechanic how much a sleigh, a plow or cultivator has cost, and he can tell you to a penny, for he has kept an exact account of it, which he has to do in order to know how to sell it, and make a living by his business. Ask a farmer how much a bushel of corn costs him this year, or how much that yearling or colt has cost to raise it, and he will say, "Oh, I ask so much for it; don't know how much it has cost me," and so it is with everything. Not one farmer in ten knows the cost of anything he produces. To this simple act ot negligence may be traced the cause of two-thirds the failures in farming, for if the farmers knew the cost of producing every article, they would then know what crops paid the best on each one's particular farm, and they could reject all those that were no profit to them. Some farms are most productive for one kind of grain and some for another, but we do not know which these kinds are without some method of ascertaining the cost of each. But, says one, it takes too much time. All a mistake, my friend. I have done it for several years, and have never taken any time that was necessary to be devoted to other business. Every farmer has leisure time enough to keep ten books, which had better be applied to that purpose than doing a great many things which they now do on rainy days and other leisure hours. It is not necessary to have a complete set of books like a merchant, one being sufficient. Take a common account book, costing about half a dollar, and take a certain space for each field, making it debtor on the left and creditor on the right side, in this manner:

Dr.	CORN-FIELD.		Cr.		
Date.	Dols.	Cts.	Date	Dols.	Cts.

Whenever you do anything to your crop, put down on the Dr. side the actual worth of it, and thus continue to do until your crop is secured, and you know how much you have expended on it. Then place on the Cr. side the actual value of your entire crop, corn fodder, pumpkins, and all that is of any worth. Then balance the accounts some of these long winter evenings, and you will know just how much your corn has cost per bushel, and whether you have made or lost on it.

As a great many farmers are wholly unacquainted with any system of book-keeping, but would like to try it, I will make an extract from my book for the past year which will show what I think to be a very good system of keeping farm accounts, and at the same time give the result of an experiment in raising corn.

My corn-field consisted of four acres, two of which I plowed in the fall. The soil, a slatey loam, was very uniform, and was all manured alike, and cultivated alike with the exception of the plowing in the fall, and I will state here that the two acres plowed in the fall gave seven and a half bushels more corn than the other, the one giving 82 and the other 89½ bushels of shelled corn.

CORN-FIELD—Four Acres, Dr.

May 3.	To	2½ days plowing,	$7.50
" 4.	"	1 day's harrowing,	3.00
" 5.	"	1 day's furrowing,	1.75
" 6.	"	3 men planting one day, 75 cts.,	2.25
June 2.	"	1 day's cultivating,	1.75
" 3.	"	400 pounds plaster and putting on,	2.00
" 6.	"	cultivating and hoeing,	4.75
July 3.	"	plowing and hilling,	7.00
Sept. 21.	"	cutting up corn, 4 days, 75 cts.,	3.00
" 21.	"	boy to bind, 50 cts.,	2.00
Oct. 15.	"	husking 10 days, 75 cts.,	7.50
" 25.	"	drawing fodder,	2.50
" 30.	"	sorting and cribbing corn,	1.50
Dec. 15.	"	threshing and marketing corn,	10.26
	"	40 loads manure, half cost,	20.00
	"	drawing and spreading the same,	8.00
	"	interest, taxes, seed-corn, &c.,	20.00
		Total expense,	$104.76

CORN-FIELD—Four Acres, Cr.

Dec. 15.	By	171 bushels shelled corn, at 90 cts.,	$153.90
	"	4 acres of fodder, at $5,	20.00
	"	18 loads pumpkins, at 50 cts.,	9.00
	"	19 bushels ears soft corn, at 18 cts.,	3.42
		Total receipts,	$186.32
		Deduct total expenses,	104.76
		Which leaves a clear profit of,	$81.56

Deducting the worth of the fodder, pumpkins and soft corn, from the cost of the whole, and we have $72.34 as the cost of 171 bushels of corn, or a little over .42 cents per bushel, which leaves about 47 cents per bushel profit. I have another piece on which the profit comes the other way. Farmer. *Oak Hill, N. Y.*

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Cheese Making—Skill more than Soil.

An objection frequently brought forward, if the farmers of one locality are asked why the cheese they make does not sell at so high a price in market as that manufactured by their brethern in other localities—is "that the land is not adapted for cheese-making, and that it would be almost a waste of material for them to attempt to make good cheese." A recent English writer in commenting on this fact says, "On further inquiry as to whether it is the peculiar geologic formation, or any remarkable difference in the species of grasses peculiar to the district that is the cause, I am again informed, this time rather dogmatically, that the land is not adapted for cheese-making, and that 'it's no use asking any more questions, because everybody knows that it isn't.' Being thus thrown upon my own resources, I refer to my geological map, and endeavor to throw a little light upon the mystery by its aid. In vain; for I find that the three counties of England producing the best cheese are not situated on similar soil. Cheshire is on the new red sandstone; North Wilts and Gloucester are on the oolitic limestone; Cheddar, on the carboniferous strata."

Mr. Tegetmeier the writer alluded to, accordingly concludes that the cause of the differences must be sought in other sources; and there is little doubt but that it depends almost entirely on the process of manufacture.

In fact this conclusion is borne out by further testimony; the Agricultural Association of Ayrshire, Scotland, have made it the subject of careful inquiry, actually sending a deputation to inquire into the plans adopted in those counties of England which produce the best cheese. The decision at which they arrived was that the quality of the cheese depends wholly upon the observance or non-observance of certain simple precautions, and that the price of the cheese depends wholly upon its quality. They were better pleased with the method adopted in the Cheddar district than with any other; the best Cheddar cheese always realizes from $16 25 to $18.75 per cwt., while that of an inferior quality may be unsaleable at half this price. The general principles of the method are stated as follows:

"The milk is employed without the removal of any of the cream; for, as might be imagined, butter and good cheese cannot both be made out of the same portion of milk. The liquid used to coagulate the milk is rennet, which is obtained by steeping in water the salted and dried stomach of the calf; these *vells*, as they are termed, should never be used until twelve months old. It is a remarkable proof of the power of the animal juices, that the rennet obtained from one vell is sufficient to curdle enough milk to make half a ton of cheese. Before the rennet is added, the evening and the morning milks are mixed together, and the temperature of the whole is raised to 80°, by heating a portion and mixing it with the remainder. In one hour the whole is coagulated. Portions of the whey are then drained off and heated. The whole of the curd is now minutely and most carefully divided; after which, as much of the heated whey is added as will raise the temperature again to 80°. It is then left for an hour, when the whey is drawn off and heated rather higher than before. The curd is again minutely broken, and pailfulls of heated whey are forced in, so as to raise the temperature to 100°. The whole is constantly stirred during the time, so that the curd becomes somewhat consistent. It is then left half an hour, in order that it may settle, when the whey is dipped out, and the last portions drained off without pressure. The curd is then cut into large slices, turned, and allowed to drain for half an hour, and when its temperature has fallen to 60°, it is subjected to a moderate pressure for half an hour. At the expiration of this time, it is broken fine in a curd mill, and the best refined rock salt added (in the proportion of two pounds to one hundred weight of curd,) made into cheeses, and placed in the cheese-press. The next morning it is turned and pressed again; and the third morning it is laid upon the shelf, having been previously laced up in a piece of canvass, to preserve the shape whilst drying. The drying is accomplished in a well-aired cheese-room, kept at a temperature of from 55° to 60°.

Spite of all that prejudiced ignorance asserts, there is no doubt but that the inferior character of certain kinds of cheese depends mainly upon three or four causes:—firstly, on the impoverishment of the milk by the removal of cream; secondly, on the employment of an excess of rennet, which produces a too rapid coagulation; thirdly, on the use of too high a temperature, from which results a hardness of the curd; and lastly, on the occasional want of cleanliness in the dairy. In the Cheddar plan—the low temperature of 80° in the first stages gives richness of taste, and the greater heat employed afterwards renders easy the separation of the whey.

The most extreme and ultra cleanliness is absolutely indispensable, as a single drop of milk sinking into an absorbent floor will cause the cheese made during a whole season to become sour and valueless."

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The Annual Register of Rural Affairs.—"Brim full of good things," says the Ohio Cultivator. "Many a large dollar book is not worth half so much as this little volume, which can be had for only 25 cents."

THE UNITED STATES AG. SOCIETY.

The eighth annual meeting of the United States Ag. Society commenced its session in the Smithsonian Institution, Washington, Jan. 10—the President, Gen. TILGHMAN of Maryland, in the chair—Maj. B. P. POORE, Secretary, to whom we are indebted for an account of its doings, from which we make the following abstract:

The President read his annual address, referring to the reports of the secretary and treasurer to show the workings of the society and its operations during the past year, and also its present condition. He recommends an increase of the salary of the secretary, whose time, he states, has for several months past been entirely devoted to the business of the society. He also recommends the purchase of books for the use of the society. The Quarterly Bulletin published by the society had done much towards forwarding the interests of agriculture.

Reference is made to the annual exhibition at Chicago, and a detailed account given of its conduct and success—a success never before equalled by any previous exhibition of the kind in the country. Articles were on exhibition from twenty-two States and Territories, and the exhibition room was crowded daily. Suggestions were made as to the correctness of awards of medals; among which was a recommendation for the appointment of a general superintendent for this purpose. Recommendation was also made to change the time of opening and closing of the annual exhibitions; also for a change of discretionary premiums—on account of the difficulty in giving them out without dissatisfaction to the recipients—to diplomas. Recommendation was also made that the Presidents of each of the similar societies of Europe be made honorary members of this society; also, that application be made to Congress for a charter for the society.

Allusion was made to the late Harper's Ferry raid, as being productive of danger to the agricultural interests of the whole country, and members from both sections of the country (the South and the North) were called upon to do their respective duties in allaying the prevailing domestic dissension.

The President also recommended that the time for holding the annual meetings be changed from January to some convenient time in February in each year, because it has been found that farmers who are members can better attend during the latter than the former month.

The thanks of the Society were voted to the President for his address, and it was referred to a committee to report as to what action might be necessary to carry its recommendations into effect.

The Treasurer's report stated that at the last annual meeting the

Balance in the Treasury was,	$417.14
Receipts at winter meeting, 1859,	187.75
Receipts on account of Chicago Exhibition,	30,436.65
	$31,041.54
Payments on account of Chicago Exhibition,	26,302.46
	$4,739.08
Balance in Treasury,	340.60
Other expenses,	$4,398.48

The Secretary's report was then made, in which statement is made of the transactions of the Society in the publication of the Journal of Agriculture, and of the letters received during the year in answer to circulars, nearly eight hundred of which have required replies. The office at Washington has been open through the year, for the convenience of all interested in the subject of agriculture.

On motion of Hon. M. P. Wilder of Mass., a committee of one member from each state and territory present was appointed to report nominations for officers for the ensuing year.

On motion, President Buchanan, and ex-Presidents Van Buren and Tyler, were made honorary members of the Society.

Mr. Calvert of Md., referring to the defunct "Advisory Board of Agriculturists" which was summoned by D. J. Browne, last winter, said that to a sub-committee of the Board had been referred the question of the Secretary of the Interior, as to how our agricultural interests might best be promoted. That committee had unanimously reported in favor of the creation of a Department of Agriculture, with a cabinet officer at its head, and had made sundry valuable suggestions. He moved that a committee be appointed to wait on Mr. Whiteley, and ask a copy of the paper for presentation to the U. S. Society to-morrow. The resolution was adopted. Mr. Calvert, as President of the Maryland Agricultural College, invited members of the Society to visit the college before their return home.

Col. Johnson of New-York, said he hoped that this report of the Advisory Board would be brought forth, for it was the only real thing of value done by that body. He thought our agricultural interest would never be fully fostered and advanced until a department was created. He saw no great difficulty in the way of organizing a Department, and thought if our Members in Congress would debate the question awhile, it would be accomplished.

The President of the United States having attended the meeting by invitation, was conducted to the platform, and appropriately addressed by the President of the Society, to which Mr. Buchanan replied in a few brief remarks. The splendid Gold Medal, valued at $200, awarded to Mr. Fawks' for his steam plow, was delivered to Mr. Buchanan, to be by him presented to Mr. F.

After the President had retired, Mr. Loring of Mass., read a paper on the subject of cattle-breeding. The views expressed, excited some discussion, in which Mr. Conger and Col. Johnson of this State, and Messrs. Tayloe, Calvert, and Clemsen took part.

On the report of the nominating committee, the following officers were unanimously elected:

President—Hon. HENRY WAGER of New-York.

VICE-PRESIDENTS.

Alabama—N. B. Cloud.
Arizonia—Sylvester Mowry.
California—A. W. McKee.
Connecticut—H. A. Dyer.
Dacotah—A. G. Fuller.
Delaware—John Jones.
Dist. Columbia—W. W. Corcoran.
Florida—S. A. Mallory.
Georgia—Richard Peters.
Illinois—S. A. Buckmaster.
Indiana—Thos. H. Collins.
Iowa—Legrand Byington.
Kansas—W. F. M. Arney.
Kentucky—W. L. Underwood.
Louisiana—J. D. B. DeBow.
Massachusetts—John Brooks.
Maryland—J. H. McHenry.
Maine—E. Holmes.
Mississippi—A. H. Harrison.
Michigan—Henry Ledyard.
Minnesota—H. M. Rice.
Missouri—R. Barrett.
New-Hampshire—H. F. French.
New-Jersey—Geo. Hartshorn.
New-York—B. P. Johnson.
New Mexico—M. A. Otero.
Nebraska—W. F. Brown.
N. Carolina—H. K. Burgwin.
Ohio—F. G. Carey.
Oregon—J. H. Lane.
Penn.—Aaron Clement.
Rhode Island—Elisha Dyer.
S. Carolina—F. W. Alston.
Texas—Thomas Affleck.
Utah—W. H. Hooper.
Vermont—Fred. Holbrook.
Virginia—W. A. Spence.
Wisconsin—T. W. Hoyt.
Washington Ter.—I. I. Stevens.

Executive Committee—Ex Officio members, Hon. M. P. Wilder, Tench Tilghman, and B. P. Poore. Members, Hon. B. N. Huntington, N. Y.; J. McGowan, Pa.; Hon. F. Smyth, N. H.; Jno. Merryman, Md.; Col. Horace Capron, Ill.; J. M. Cannon, Esq., Iowa; Col. Josiah W. Ware, Va.

Treasurer—Hon. B. B. French, Dist. of Columbia.

Secretary—Maj. B. P. Poore, Massachusetts.

THIRD DAY.

Mr. Calvert of Md., presented a series of resolutions expressing the sense of the Society in relation to agricultural education; also deploring the executive veto of the Morrill bill passed by Congress last year, and calling upon the agricultural societies throughout the states to co-operate with this Society in endeavoring to obtain the passage of a bill containing provisions similar to those contained in said bill. In his remarks Mr. Calvert censured the President for his veto of the Morrill Land-bill, and was replied to by Mr. Mann, when on motion of Mr. Kelley, the subject was laid upon the table.

The Society entered upon the consideration of the subject of the future establishment of an agricultural division by the government, either under the Department of the Interior, or as a separate and independent branch, with a cabinet officer at its head. A protracted and very interesting debate ensued, which resulted in the passage of the following resolution, introduced by Mr. Rockwell of Conn:

Resolved, That the Society would earnestly recommend the creation, at the present time, of a separate Agricultural Bureau in the Department of the Interior.

Addresses were then delivered by Dr. J. G. Cooper on the Forest Trees of America, and by Prof. Henry on Meteorology.

The Grazier and Breeder.

REGULARITY IN FEEDING.

Every good farmer knows that any domestic animal is a good clock—that it knows, almost to a minute, when the regular feeding time has arrived. If it has been accustomed to be fed with accufacy at the appointed period, it will not fret until that period arrives; after which it becomes very restless and uneasy till its food comes. If it has been fed irregularly, it will begin to fret when the earliest period arrives. Hence, this fretting may be entirely avoided by strict punctuality; but it cannot be otherwise. The very moment the animal begins to worry, that moment it begins to lose flesh; but the rate of this loss has never been ascertained—it is certainly worthy of investigation—and can be only determined by trying the two modes, punctuality and irregularity, side by side, under similar circumstances, and with the same amount of food, for some weeks or months together.

There is one precaution to be observed in connection with regular feeding, where some judgment is needed. Animals eat more in sharp or frosty, than in warm and damp weather. Hence, if the same amount by weight is given at every feeding, they will not have enough when the weather is cold, and will be surfeited when it is warm and damp. Both of these evils must be avoided, while a little attention and observation will enable the farmer to do it.

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[For the Country Gentleman.]

ON CATTLE FEEDING.

In answer to "A Maryland Farmer," (see Co. Gent., p. 403,) I would say that the calves I intend to sell, I commence fattening when a few days old, by giving oil-cake meal, oat meal, or barley meal, along with their milk. This I continue until they are 3½ or 4 months old—then turn them to pasture; but I feed them hay or cut grass from the time they first begin to eat, until they are turned to pasture. Early cut clover hay is much the best and better than pasture, and I don't think costs any more.

The following winter I feed clover hay, with some meal. Good clover hay, with a pint of oil-cake meal, will make them grow finely. The next summer give good pasture, and take them to the yards whenever the pasture fails. Feed two quarts of oil meal daily, with cornstalks or good clover hay—the hay is best with me. In this way I have made them realize me from $47 to $60 each, when 22 to 24 months old. They generally consume from 750 to 1000 lbs. each, of oil-cake meal in all, by the time I sell them.

It is only occasionally that I raise calves. I can do better by purchasing two, three, or four years old cattle (3 and 4 best,) in autumn, and fattening in winter. These I generally feed on oil cake, corn meal, or meal from other grain, mixed with the oil meal. If oil meal costs little more per pound than other meal, I sometimes feed that alone all the time to part of my cattle. It is better than meal from grain to give lean cattle. They begin to gain much sooner on that than any other food I have ever tried· But no farmer ought to buy lean cattle to fatten in winter. They should be good fair beef to begin with. Still lean cattle I have often found to pay well when bought in Feb. or March. Feed them from eight to ten bushels of meal—say 480 to 600 pounds each—until the pastures are good, and then six weeks of good pasture will generally make them prime beef. In this way I have done very well; but I have generally bought these after selling off my fat cattle. I have, however, done better by purchasing those that have been fed meal for two months, where the farmer has lost hope of ever getting pay for his grain. Such cattle could soon be made thoroughly fat at no great cost.

I give the Maryland Farmer the way I have done; but I cannot now ride or drive about in cold weather, and must change my plan, as I find it very difficult to find a man who can purchase stock to meet my views. I have often thought it singular that farmers who see me selling steers from 22 to 24 months old, at from $47 to $60, (very few at the lowest price,) should keep theirs until 3 or 4 years old, and then not have them worth over from $20 to $40, without making an effort to do better. There is no intelligence or enterprise in this. I have no doubt there are numbers of farmers in the State of New-York, that make as good cattle or sheep as I do, but then they *are far between*, and perhaps not numerous; but I have done my best to have a better state of things. The only thing I ever kept in the dark, was when I commenced feeding oil cake meal. I was afraid if farmers were told how profitable it was, I would not get what I wanted, and for some years I said nothing on that subject. I said nothing about draining for some years after I commenced. I was afraid farmers would all go at it, and that would raise the cost on me; but it let me know that I did not understand human nature among the farming population so well as I thought I did—at least so far as feeding oil cake and tile draining were concerned; but they go the tile draining now, and they will follow with the oil cake, I have no doubt; but as a whole, their faith is very weak where additional labor and cost has to be encountered. JOHN JOHNSTON.

Near Geneva, Dec. 24.

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[For the Country Gentleman.]

SPARRED FLOOR STABLES.

EDS. CO. GENT.—Observing in your paper some account of your Junior's visit to Tiptree Hall, I think it may interest some of your readers to learn that I am acting upon some of Mr. Mechi's plans, and propose following his teachings yet further, and sending the results to the Co. GENT. if acceptable.

I have two young bullocks and a pen full of young pigs, upon his open-boarded floors, and have come to the conclusion that they are "*the thing.*" I had great fears, lest, in this cold climate, the droppings should freeze so as to stop up the spaces; but although my stable is far too cold and open, and we have had much cold weather of late, (as low as 10° below zero,) this has not been the case to any considerable extent. In my pig-pen, which is warmly constructed and pigs packed close, there is no frost at all, and they are perfectly clean and dry, as are the bullocks, although they have never been groomed. During the present scarcity of fodder the advantages of the system are peculiarly manifest. The bedding is set free for food. I cut mine up with hay, with a horse-power cutter, and feed horses, cows and sheep with the chaff. Double the number of animals can be kept, and large quantities of excellent manure, the pure article, can be made. The daily labor of bedding-down, and cleaning out the stables, which is considerable with a large stock, is entirely saved, as also the piling and repiling of the manure. Two or three minutes suffice to take up one of these floors, and a cart or sleigh can be backed in to take the "pudding" (as Mechi calls it) directly to the field.

The slats or boards should slip into a groove at either end, so that they may be easily lifted. I have no nails in mine. In cold weather I find the droppings have a tendency to pile up under the floor, but by lifting up two or three slats, a man can readily get down and level it. I have only had to do this once as yet, and my beasts have been in since the middle of Nov., besides which my pits are far too small, being only arranged in a temporary way as an experiment. My boxes are about 6 by 10, but for the future I propose making them smaller, say 5 by 7.6, so as to economize the animal heat. The pit under the floor must be about 4 ft. in depth, to contain four or five months droppings. I hope next winter to have all my animals, except the horses, on these floors, and expect to find many of your enterprising readers adopting the plan. If by connecting the soiling system with the boarded floors, we can double our stock, and we may safely count on that, it will be great gain.

In practice I find no effluvium or unpleasant smell whatever to arise from the droppings, as they run together so as to exclude air and thus prevent fermentation. Also, I find no difficulty in getting the beasts to go on to the floors, after the first night or two; they run in just as willingly as those that are on the old straw beds. With all deference, I submit that too much has been said about the *comfort* and *warmth* of bedding *under* animals. It must be recollected that on my floors the beasts lie perfectly *dry*, while on a straw bed they are generally more or less wet, which is not conducive to *comfort;* and further, if I lie all night without any bedclothes *over* me, I shall not be kept *warm* by the bed of down that may be under me. So as I keep in my own animal heat by means of covering, I keep in that of my animals by close packing, and for *health and comfort*, I think they agree with me in preferring a dry hard bed, to a wet soft one. W. R. FORSTER.

Canada West.

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[For the Country Gentleman and Cultivator.]

Estimate of the Value of our Dairy Products.

MESSRS. TUCKER & SON—I have not the egotism to suppose that I shall do justice to the subject on which you have requested me to furnish some papers for publication in your journal.

The subject is too extensive, the facts are varied, the conditions involved are in part obvious, but in very essential and important particulars recondite, and besides my knowledge and experience are deficient.

Milk of standard quality rapidly decomposes. Curd, the product of milk, including both casein and butter, becomes almost as speedily putrescent and disgusting. It is nevertheless true that this animal product, MILK—subtile, sensitive, perishable—is the basis of a department of *husbandry*, inferior to no other in importance, viewed in its present condition or future promise.

No doubt there has been much slovenly practice, and perhaps in many cases want of success in the absence of system, method and *management*, while prejudice has whilom elbowed it out of genteel society.

Were I asked the question, "Is Cotton king?" the reply would be, "No; but Milk is;" and to justify this answer a few particulars shall suffice.

It is a truism that a judiciously selected herd of dairy cows, well cared for and thoroughly handled, will, on an average of a series of years, in lots of thirty to eighty, more or less, produce annually from each cow 450 to 550 pounds of cheese. Allowing something for smaller product of cows under four years of age, not usually embraced in such a selection, and also for the fact that the entire number of cows will probably fall below the average quality of dairy herds, and the minimum average ought to be stated at no less than 400 pounds of cheese as the product per cow. The standard estimate of cotton bales answers in weight to this number, so that one bale of cotton, and the yearly product of one cow in cheese equivalent, are alike in weight. As to prices, the winter's sales for the average of the last seven years are nine and one-third cents at the home delivery within fifteen miles of the farm, and this is by no means the highest range of cheese sales which might be quoted.

The cotton bales reported in census of 1850, were.........	2,445,798
The cows of 31 States and District of Columbia were......	6,385,094

Stating the home price of cheese and cotton as six to ten, which doubtless gives to the fibrous staple great advantage in the comparison, and we have a result of estimated cheese value of $153,242,256 per annum, and of cotton $97,831,720, while the total domestic exports were less than one hundred and thirty-seven millions.

The four special crops, tobacco, rice, sugar, and cotton, (only two of which are food crops,) aggregate 1,630,000,000 pounds, while the milk (cheese equivalent) aggregates 7,554,000,000 pounds.

Referring again to the census statistics of 1850, the total number of pounds of butter, in round numbers, is 313,000,000, and multiplying it by three as a cheese equivalent, gives 940,000,000 pounds, to which add the cheese reported, 105,000,000 pounds, and this makes an actual cheese product of *one thousand forty-five million pounds*, exclusive of the vast amount of milk consumed in its primitive state, by families in country and cities; and also by animals, to produce other forms of food substances as veal meat and raising young stock.

New-York farmers may smile at the very modest calculation of twenty-four dollars product per cow in the above estimate. If so, they can take an enterprising dairyman's standard of money product, and double the figures, thus showing an excess of *one hundred and sixty-three million dollars*, yearly product from this humble branch of husbandry, over the entire aggregate of *domestic exports*; and of sixty-four million dollars over the aggregate of the far famed and universal corn crop of this country, estimating the price at forty cents per bushels.

The area of Indian corn is given at thirty-one million acres, while that of hay and pasture is put down at thirty-three million acres.

It may be safely estimated that more than one million persons are more or less employed daily in this department of production for at least two-thirds of each year.

Onondaga Co., N. Y. JONATHAN E. PETTIT.

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Subsoiling—Liquid Manure—Green Crops.

MESSRS. EDITORS—Can you inform me which is the best pattern of subsoil plows? I have a farm which has been plowed in five foot lands. The soil, which is clay, seems to be tenacious, and holds water a long time, although it has sufficient fall, and is not at all springy. Do you not think subsoiling would obviate this, and enable me to plow in wide lands, and use a mower and reaper, which, in the present state of things it is impossible to do? How often is the operation necessary? Would subsoiling with every corn crop answer through the rotation? It has never, I believe, been tried in this neighborhood, and I think it the thing required.

I have a pump situated below the barn-yard, so that the washings from the manure render the water entirely unfit for use. Can you or any correspondent inform me of any remedy?

I should like to know of any of your readers who have tried it, what is the best grain to sow for plowing in green for manure—the proper season to plow, and the best crops to sow or plant afterwards. Does this course answer in heavy soils as well as in light ones?

Bucks Co., Pa. HENRY C. DAVIS.

For land nearly clear of stone, the reversible subsoil plow represented in the annexed cut, (fig. 1,) is the best.*

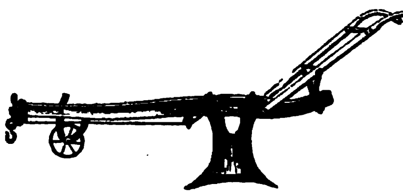

Fig. 1.

But if there are many stones in the soil, this plow will be thrown out, or will be difficult to enter among them; in which case one with a much shorter sole or shoe will be necessary, like that represented in fig. 2, which is one of the best forms of the ditching plow. The ditching plow has been extensively used for subsoiling by different persons, and has been found to answer well, but it is not equal to that shown by fig. 1, for clear soils.

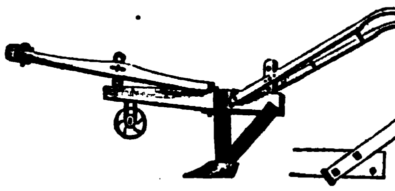

Fig. 2.

Subsoiling is of little use on heavy wet soils, before underdraining, or its effects are at best but temporary, and last hardly a single season. If the subsoil is broken with it in spring, (and it must be *late* in spring, after the subsoil has had several weeks to become dry enough, or the plow will only work it into mortar,) it may continue mellow through the summer; but the fall rains, or if not the fall, those of spring, will settle the earth back again into its original compactness. Underdraining before subsoiling is of the utmost importance, and will prolong the beneficial effects of the subsoiling through several seasons. We would advise our correspondent to try thorough underdraining, if it is only to the extent of an acre or two, by way of experiment. He can also, if he chooses, try subsoiling without it. Compare the results of the two operations separately, with their results combined.

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* It is manufactured by Holmes and Stringer, Munsville, N. Y.

Washings from the barnyard should never be allowed to run off. Put up eave troughs on the buildings, so that the water from the roofs may not wash the manure; make the manure yard concave or "dishing" if necessary; and keep enough straw or other absorbing substance to hold all the liquid portions. The advantages in saving this valuable part will be greater even than that of the pure water from the well.

The three crops most commonly sown for plowing in, are clover, indian corn, and buckwheat. Clover is usually regarded as best, and is an excellent crop to precede wheat. Buckwheat is more easily raised, but is less enriching. Perhaps, however, this disadvantage is nearly balanced by the two crops which may be buried in a single season. Corn has been less tried; but the heavy growth which it yields when sown in furrows at the rate of two or three bushels per acre, strongly commends its use. All these crops, but the corn especially, need rolling or harrowing, to enable the plow to cover them. Autumn grain may be sown upon the inverted earth, or spring crops the year following. The best time to plow in is between the time of flowering and the ripening of the seed. The decay of the vegetable fibre takes place more rapidly in light than in heavy soils; hence in the latter the plowing may be shallower, and it should be a little earlier, when the fiber will decay more readily.

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SMUT IN WHEAT.

We have received a few communications, taking the position that smut in wheat is caused by an *insect.* One of them states "that all the *theories* and *suppositions* of the fungus origin of smut, rust, &c., are founded upon mistaken views of the subject, I many years ago satisfactorily demonstrated, by long continued observation and experiments on my own farm."

We are not however informed what were the nature and character of these observations and experiments, and especially whether they were conducted under a powerful achromatic microscope—an indispensable requisite to such investigations.

We never yet found the man, no matter how much he might have previously doubted the fungus character of rust, who questioned this character a moment after a careful examination through such a microscope. The plants are most distinctly seen with root, stem, and seed-vessel, so far as cryptogamous plants are furnished with these parts; there is no chaos or confusion about it; every single plant is like all the rest. And the seeds are so minute that they will flow through the sap-vessels with perfect freedom, and impregnate every part—ready to burst into living plants whenever peculiarities of the weather favor their development. The same is true, in part, with the smut in wheat.

We have found by our own experiments, and many other observers have arrived at the same result, that washing smutty seed, greatly lessens the tendency to smut in the product; and washing in lime water, nearly or wholly destroys this tendency. This could not well be the case, if an insect produced the evil after the head from this seed is formed. The experiment has also been many times repeated, of impregnating with smut through the seed sown.

If our correspondents will procure the best achromatic microscopes now made, and make a free and accurate use of them, they will probably make many new discoveries of a highly interesting character. For, to undertake to decide questions of this kind, without the most powerful magnifiers, would be like a person undertaking to read the common type of a book across a river or at midnight.

◆

[For the Country Gentleman and Cultivator.]

PRODUCT OF ONE COW

Editors of Cultivator and Co. Gent.—Having seen various statements in your journal of the quantity of milk given by different cows in stated periods, I send you a statement of two years doings of one that I owned for the last five years, but lost in calving a few weeks since. She was said to be one-half native and one-half short horn; her appearance warranted *the latter*, at least. Living in the city, I could make no dependence on pasture, but have had to depend on what I gave her in the barn. She gave the most milk the first year, as you will see by statement annexed. I account for this in two ways. I milked and fed her myself, and I am satisfied I can make more milk (in the pasture I have) to have my cow calve in winter, when I can feed, cut feed, roots rowen oil meal and flax seed, than I can on grass, when I can't add the former. I am not one of those who are able to make large quantities of milk on grass alone. I can't obtain the latter, and therefore had to find substitutes, or rather auxiliaries, and plenty of them.

I have often heard it advanced that cows giving large quantities, could not give good milk. In answer to this, I will say that one season, when farrow, I took the cow into the country where my family were staying, from July to October. When she was giving on an average nine quarts daily, after using all we wanted in a family of seven persons, my wife made over seven pounds butter per week for fourteen successive weeks, which I think is proof positive that her milk was A. 1. The most she ever gave me in twenty four hours, milked 6 A. M. and 6 P. M., was twenty-three quarts one and a half pints.

1856—Took calf away Feb. 1st,	Quarts.	
Amount milk from July 1st to Jan. 1st,.........	2,459	
do from August 1st to Feb. 1857,..........	1,928	
Number of quarts in one year..................	4,387 at 5c	$219.35
1857—Took calf away July 1st.	Quarts.	
Amount milk from July 1st to Jan 1st.........	2,239-2	
do from Jan. 1st. to July 1st., 1858,...	1,683	
Number of quarts in one year,................	3,922-2 at 5c	$196.12
Total for two years,..............................		$415.47

All the milk not used in the family was sold at the store at 5c per quart, many milk carts selling at 6 the year through. H. B. Congdon, *Providence, R. I.*

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Asparagus and Pie-Plant.

The Gardener's Monthly recommends that Asparagus be planted "twenty inches to two feet from plant to plant, and the rows eighteen to twenty inches apart." [The plants are often set four times as near together, in which case it is impossible for them to develope themselves properly and become of the largest size. For horse-culture, the rows may be 30 inches apart, and the plants 15 inches in the row. With rich soil, this will make "giant asparagus of any sort."] A depth of two feet is recommended for the soil—and the roots set four inches under the surface. Fertility of soil is all important. The editor says there is "a good deal of humbug" about the recommendation of salt for asparagus.

Pie Plant.—The following sorts the same journal states to be best: Prince Albert and Tobolsk for earliness; Magnum Bonum, Victoria, and Cahoon's Mammoth, for size and productiveness; Linnæus, for size and quality; and Prince of Wales and Crimson Perfection, for beauty of color. Each plant should have an area of at least two feet square for its proper development, and a very rich soil.

Inquiries and Answers.

Cahoon's Broadcast Sower.—In answer to inquiries, we can state that we have given the small or hand machine a full trial. It answers admirably for sowing grass seed, which it scatters evenly and rapidly, and the seed being light, it is not laborious to carry. It also sows wheat, barley, and other large grain with great expedition and evenness—*while the operator is working it*—but it is necessary for the workman to stop so often to fill his hopper with seed, that little time is gained over common hand sowing. The labor is also considerable. These remarks apply to the ten dollar machine. The thirty-five dollar one, drawn by a horse, we have not tried, but have no doubt it obviates all these objections, and we see nothing to prevent its sowing eighty acres a day, as some of the certificates state. D. H Furbish, of Portland, Maine, is the proprietor of this machine, and will give any information in relation to it.

Bloody Milk.—I have a young cow that his given bloody milk out of one teat for several weeks. Will you please give me a remedy for it. A. M. [The treatment must depend on the cause. If occasioned simply by an injury, time will cure it. If from garget, the treatment must vary with the symptoms, which until we know, it would be very difficult to prescribe understandingly—as the disease might be benefitted in one case by light food, and in another might require only local treatment. A general remedy, for all circumstances, so often recommended for a disease, is empiricism.

Sheep vs. Swine.—I will feel myself under many obligations, if some of your numerous readers would inform me through the columns of your paper, in which there is most profit—raising sheep or hogs, where pork is usually worth from $3.50 to $4 gross, and bacon from 8c. to 10c., and where wool is worth from 25 to 40c. per pound, and sheep for butchering bring $2.50 to $3.50 per head. Also which is the best and most profitable breed of sheep—also the best breed of hogs for farmers generally. B. B. R. *St. Joseph, Mo.*

Beans for Horses and Cows—Are New-York farmers in the habit of raising beans for horses and cows, and if so, how are they fed? Do you consider they make as strong diet as corn? Is the current year's crop considered injurious? English farmers say they should not be used until a year old. Understanding that northern farmers raise peas and beans extensively for stock purposes, we who are turning our attention somewhat to the latter crop would like to have the experience of others. Subscribers. [Will those who have tried this material for feeding, please report the results of their experiments?]

Plants Growing without Seed.—Is *seed* necessary to vegetable production in all cases? Where the chemical elements of certain vegetables exist abundantly in the soil, will they not spring up and assume vegetable forms without the germs of seed? Instance the thousands of hickory groves springing up throughout the west since being settled, where none existed before. L. C. *Wisconsin.* [No plant ever springs into existence spontaneously. There must be either a seed to start the individual, or buds, eyes, &c., to extend or multiply that individual after having thus attained existence. Seeds exist in the soil or are scattered in innumerable ways; which not being understood by superficial observation, the notion is sometimes adopted that new individuals spring spontaneously into existence, or else grow or are changed from other plants. It would be as impossible for farm animals to spring into being, without progenitors, by merely heaping together oats, hay and corn, or milk and porridge, as for plants to do the same by the use of heaps of manures or "elements."

Little Giant Mill.—Can you inform me where I can obtain the Little Giant Mill, for grinding corn in ear, &c., and whether there are better mills for the purpose? S. Barstow. *St. Albans, Vt.* [It is furnished by Emery & Co. of this city, at the following prices: No. 2 for $40 with levers, and No. 3, $45, less 5 per cent. cash at retail We have never used the Little Giant, but have given a thorough trial to Joice's Star Mill made by Hildreth & Co. of Lockport, and find the latter an admirable machine. We are unable to speak from experience of their comparative merits.]

Bitter Honey.—Why is honey some years very bitter? This year it was so bitter that it could not be used—neither did the bees swarm. Can any one tell the cause of the bitterness? A. R. *Dallas Co., Ark.*

Tobacco Culture —Having recently commenced farming, and believing that I have land that will produce tobacco, I take the liberty of asking you the proper way of planting the seeds, and also the proper time. S. B. [Will some of our readers please furnish the desired information?]

Hornless Cattle. (*A subscriber in Indiana.*) This tendency in cattle exists with the breed. The Galloway cattle are nearly all hornless. The same peculiarity exists in the Norfolks, Suffolks, &c. A small portion of the same tendency is diffused through many of the mixed race in this country, occasionally becoming developed in hornless animals. The constant mixture of blood prevents them from becoming a distinct race as in Britain.

Breed of Swine.—What breed, or how crossed, is the breed of hogs fattened around Auburn? Our butchers consider them the best hogs that ever came to our market, or in fact, any other. W. *Utica.* [Our impression is, they are a mixture of Suffolk and Leicester, with some of the older native breeds, without any very certain amount of each. We hope some of our Auburn readers will give us some particular and accurate information.]

Plan of a Dairy.—I wish to learn through your paper, the best and most appropriate way of constructing a dairy for a private family, one that will best keep butter and milk during the warm season of the year, where the water is thrown up by the hydraulic ram. S. [We have not met with a better one than that described on p. 217, first volume of "Rural Affairs," and although that is partly intended for a market dairy, yet it is equally applicable, constructed of proper size, for a private establishment]

Fall Plowing.—What do you think of plowing sandy soil in the fall? I manure it one-half with fine manure, and the other half leached ashes, and plow 6 inches deep. What would you put on it in the spring? J. E. Orvis. *Massena, N. Y* [Fall plowing does well for early sown crops—barley would no doubt succeed well—and perhaps oats or spring wheat. Unless the soil is quite light, it is apt to become too compact before planting time, unless re-plowed or mellowed well with a gang plow, or Shares' harrow, just before planting.]

Double Michigan Plow.—Can you inform me to whom, and where I must apply, for the right of making up and disposing of the Double Michigan sod and subsoil Plow—also, what year the patent was issued? Your early attention to the above will oblige, W. T. [We are unable to answer.—Will some of our readers favor us with the desired information?]

Feeding Roots.—Please inform me through The Cultivator, the best plan of feeding turnips and Ruta Bagas to sheep and cows. A. B. [Slice them up, and feed them to the animals—if they do not readily eat them, add meal and a very little salt. To prevent any injurious effect, begin moderately, and always feed with a portion of dry fodder. Sheep soon learn to scoop out turnips with their teeth, without slicing. Willard's root slicer costs ten dollars and cuts a bushel a minute; but in the absence of any machine of the sort, a steel spade, ground sharp, will cut rapidly, if the roots are placed in a shallow box with a hard plank bottom.]

Sparred Floors.—I am about building a hog stable, and think of laying stable floors for cattle upon the "spar plan." Your correspondent, W. R. Forster, Canada West, suggests that they be dug four feet deep under the floors. Suppose in the spring, this space to be full of the "pudding," where will a man stand to shovel it into a cart backed up to the stable door. It appears at first thought, as if his footing must be very soft, and rather uncomfortably deep. Why is it best to have "boxes" instead of stalls? Would not quarrelsome cattle fret their weaker mates? Will your correspondent please state what he considers the best size of pens for hogs, and whether hogs will do well raised in a pen without ever coming to the ground. I have a boiling apparatus, and wish when I get my pens made, to try the effects of cooked and raw food upon the thrift of the animals. L. F. D. *Troy, O.* [We shall be glad to hear from Mr. Forster and others as suggested, and hereafter shall have more to add ourselves upon the subjects alluded to. Meantime the views and experience of readers, either at home or abroad, will be very welcome, both to the writer of the above and doubtless to many others.]

Lime for Cattle.—In your account of Mr. Clift's farm, a mixture of salt and lime is recommended for preserving hay when got in green. Would not the lime be injurious to stock, fed on the hay, by its caustic nature, and also by making the hay dusty? Wm. F. Bassett. [We have never used lime with salt for hay, but the latter only—and therefore cannot speak from experience of its effects. It certainly should be used very sparingly if at all, which we question.]

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An Odd Fellow.—Morpheus, for he is undeniably a Nod fellow.

SWINE FED ON SKIM-MILK

We published a few years since a statement of the successful feeding and fattening of swine on skim-milk, as practiced by Joseph Greene of Macedon, N. Y., a mode, however, not entirely new. He fed spring pigs through the summer, and when six or seven months old, they usually averaged about 300 pounds each. Three, at seven months, weighed in one instance, after being dressed, no less than 956 lbs. in the aggregate. Another animal at six months and ten days, weighed when dressed 298 lbs. He ascribed his success to feeding *undiluted* milk, or in its most concentrated state.,—without any water thrown in. This made them grow rapidly, with solid square bodies, and not like the flabby animals produced when much liquid and little nourishment are given. The fattening was completed on the ground meal of *old* corn. They did not thrive well on new corn, and failed on "nubbins."

Several others have adopted a similar mode of treatment, with like success. One instance that has recently come to hand, is the following, reported in a late number of the *Union Springs Herald*.

"David Anthony killed, on Saturday last, a litter of eight spring pigs, about 8¼ months old, and the total weight of which were 2,350 lbs.,—an average of 293 lbs. each. The lightest one weighing 280, and the heaviest 320 lbs. We call that hard to beat. If any one can do it, send on the figures."

On inquiring personally of David Anthony as to the mode of feeding adopted, he informs that these animals are chiefly indebted for their rapid growth to the skim-milk he gave them, of which he had a plentiful supply. He finished feeding them on 15 bushels of ground Canada corn, which was all the grain he gave them. He intends to plant a few acres of the Canada corn for fattening his swine another year, as it is fully ripe before the first day of autumn, and is therefore found to be nearly equal to old corn for fall feeding.

* * *

[For the Country Gentleman and Cultivator.]

How Much Corn will Make a Pound of Pork?

MESSRS. EDITORS—On the 3d of Nov., 1859, I built a small, tight pen, and covered it well. I put in it a small sized shoat, but in good condition, and inclined to fatten easily, and weighing 92 lbs. gross. His drink was well-water, and his food corn in the ear exclusively, weighed to him 100 lbs. at a time. The first 100 lbs., weighed the same day the hog was shut up, lasted till the 17th—14 days. Second 100 lbs., weighed Nov. 17th, lasted till Dec. 2—16 days. Third 100 lbs., weighed Dec. 2, lasted till Dec. 14—12 days. Fourth 100 lbs., weighed Dec. 14, lasted till Jan. 1—17 days. Jan. 2d & 3d a few ears were given him, not weighed, the amount, however, not equal to the waste. Jan. 4th killed the hog. Live weight 146 lbs.—net weight, 116 lbs.

RECAPITULATION.—The hog ate in 61 days, 400 pounds corn, or about 6½ lbs. per day. Live weight at shutting up, 92 lbs.; live weight at killing 146 lbs.; increase in live weight 54 lbs., or a little less than one pound per day. 400 lbs. ear corn at 70 lbs. per bushel, equals 5 5-9th bushels, and at 35 cents per bushel, is $2.00—54 lbs. pork, live weight, worth at 4 cents per pound, $2.16, or a net gain of 16 cents to pay for trouble of feeding two months.

FURTHER CALCULATIONS.—At killing, live weight 146; net weight after dressing, 116; loss 30 lbs., or a little over 20 per cent. By the same ratio, his net weight at shutting up would be 73 lbs.; increase in net weight 43 lbs., worth, at say 5½ cents per pound, $2.36, or 36 cents more than the corn fed to him was worth in the crib.

REMARKS.—The hog when shut up was 7 months and 2 days old, and at time of killing was 9 months and 4 days old. He was small boned, but fattened very easily, and for some days before killing it was difficult for him to get up or breathe. The corn with which he was fed was very sound and good, and I occasionally gave him ashes and stone coal, to promote his digestion, destroy worms if any, and sharpen his appetite. A. S. PROCTOR.

Rome Farms, Illinois, Jan. 6.

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[For the Country Gentleman and Cultivator.]

TO PREVENT LICE ON CALVES.

EDITORS. CO. GENT.—It is generally conceded that "an ounce of preventive is worth a pound of cure," and as I often see remedies for *killing* lice on calves, such as snuff, tobacco water, grease, &c., I will give a *preventive*. It is safe—no injury to the animal will follow its use, and if regularly attended to during the cold months, lice will be scarce. It is as follows: take of shorts one bushel, and a like quantity of corn, barley or oat meal, and mix well together—give each calf a pint of the mixture night and morning—it can be fed on cut hay dampened; a better way, however, is to add boiling water sufficient to scald it, and let it stand until nearly cold, and then feed it in the form of a slop. If oil meal can be conveniently obtained, a small quantity may be added to advantage. They should be warmly stabled, and have all the good hay they wil eat, and a full supply of pure water twice a day. The above recipe is applicable to older animals, by increasing the quantity according to age and size. J. L. R.

Watertown, N. Y.

* * *

[For the Country Gentleman and Cultivator.]

CULTURE OF THE SWEET POTATO.

FRIEND TUCKER—I will try to give you our mode of raising sweet potatoes in Gloucester county, N. J. We begin by making a hot-bed for sprouting the potatoes.—We dig a trench six feet wide; then put some old hay or corn stalks in the bottom; next put eight or ten inches of stable manure; press it down lightly. We then cover with two inches of fine earth, and put in the potatoes, not so near as to touch one another, and cover them with about two inches of fine earth. We next prepare the ground the same as for corn—mark it out both ways with a small plow, two feet nine inches apart, and put in a small shovel full of good short manure, and make a small hill on the same. About the middle of May we commence pulling sprouts, and setting them in hills, one sprout in a hill. We use the cultivator and hand hoe pretty freely, taking care to keep the grass and weeds out. Gloucester county goes pretty largely into sweet potatoes, many of us planting from twenty to forty acres. We allow one bushel of potatoes to sprout sufficiently for one thousand hills. JOSHUA PINE. *New Jersey.*

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CONNECTICUT STATE AGRICULTURAL SOCIETY.—At the annual meeting, held at Hartford, Jan. 11, the following officers were elected:

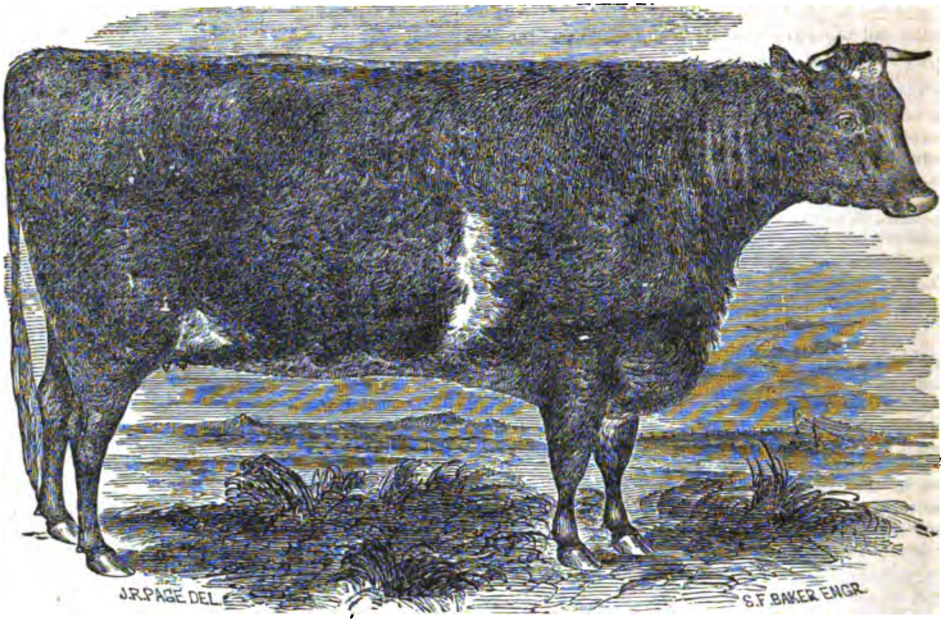
President—E. H. HYDE, 2d, Stafford.
Vice Presidents—Robbins Battell, Norwalk; John T. Norton, Farmington.
Directors—Charles F. Pond, Hartford, Hartford Co.; Washington Webb, New-Haven, New-Haven Co.; James A. Bill, Lyme, New-London Co.; George Osborne, Redding, Fairfield Co.; Charles Osgood, Pomfret, Windham Co.; Abijah Catlin, Harwinton, Litchfield Co.; Levi Coe, Middletown, Middlesex Co.; R. B. Chamberlin, Coventry, Tolland Co.

Henry A. Dyer continues as Secretary and actual agent and business manager. The Treasurer's report shows:

Expenses, 1858 and 1859,	$12,624.39
Receipts,	14,726.80
Balance on hand,	$2,102.81

☞ An interesting report of the discussions at the winter meeting of the Fruit Grower's Society of Western New-York, held at Rochester last week, will be found in our Horticultural Department. The following officers were elected for the present year:

President—Col. B. HODGE, of Buffalo.
Vice Presidents—J. J. Thomas, Union Springs; Wm. R. Smith, Syracuse; W. R. Coppock, Buffalo.
Treasurer—W. P. Townsend, Lockport.
Secretary—C. P. Bissell, Rochester.


J.R.PAGE DEL.
S.F. BAKER ENGR.

2d Duchess of Airdrie–Bred by R. A. Alexander of Woodford Co., Ky.

Those who have visited the beautiful Short-Horn herd belonging to R. A. Alexander, Esq., of Woodford Co., Ky., will not need to be reminded that among the choicest of them, the "2d Duchess of Airdrie" occupies a high rank. She is red and white, calved 28th September, 1855, and was sired by "2d Duke of Athol." Her dam, "Duchess of Athol" was sired by "2d Duke of Oxford," and her grand-dam "Duchess 54th," carries her back on one side to "2d Cleveland Lad," and on the other to a long line of noted "Duchesses."

TREATMENT OF RINGBONE.

Can you inform me what would cure a fine mare I have, of what is called ringbone, which she has had for something near one year without my being able to find a remedy. Chs. Alexander. Posey Co., Ind.

There is no cure for confirmed ringbone. It is supposed to be hereditary, and the tendency is perhaps hastened by sprains or jars, in driving rapidly over a hard or very uneven road. To prevent it, use horses carefully, and *never breed from those who have it*, or from the relatives of such. When the disease first appears, *rest* is no doubt the best remedy. Burning, formerly so much practiced, is now generally regarded as both useless and cruel. A scar should never be made in treating it. Remedies causing violent external inflammation often extend further in, in their influence, and frequently increase the disease. The application of acetate of cantharides is recommended by Dr. Dadd. When the part is hot, apply cold-water bandages.

There is no doubt that many of the remedies for various diseases, but for this more particularly, owe their supposed efficacy to compelling the animal to *rest*.

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[For the Country Gentleman and Cultivator.]

ECONOMICAL FEEDING OF STOCK.

Messrs. Editors—"The harvest is past, the Summer is ended,"—Autumn with its almost constant Indian Summer, has passed quietly and dreamily away, and Winter with its stern and exacting realities, is with us. The farmer and his beasts have toiled and sweated hard, during the months that are passed, to lay up a store of food for that season, which, north of Mason and Dixon's line, occupies about one-half of the entire year, and seems to have been designed for the purpose of sharpening the faculties of animal nature, and preventing the undue development of man's acquisitiveness. Certain it is that the great majority of mankind have hard enough work of it to accumulate sufficient in summer to satisfy the demands of winter.

To the hard-working farmer, the subject of "the economical feeding of stock," is of intense interest, and second to none in importance and practical utility. This has always been so, and always will be so in this climate; and yet how little is certainly known, or has been demonstrated by careful experiment, that would be satisfactory to the anxious inquirer or new beginner in practical agriculture.

The present is the season peculiarly appropriated for the discussion of this subject, and I do hope that you and your valued correspondents will "ventilate" it as thoroughly as the circumstances of the case will allow. Perhaps the present scarcity of feed in your State, will lead to more careful attention in preparing and disbursing the stock of cattle and food, thereby one more ray of light be shed on this at present rather dim subject. Why is it that none of your wealthy farmers have not taken this matter in hand and given us detailed experiments, such as we find in English books. Surely they have the means and the leisure. The English experiments are so mixed up with *turnips*, that they are of but little use to us. We want experiments on our own soil, in our own stables, under our own peculiarities of climate, and with our own varieties of feed.

In a late number of the Co. Gent., in the article on "Cooking food for Swine," you well remark "that there exists the most singular diversity of opinion in regard to cooking" their food—some asserting that grinding and cooking trebles the value of corn, while others maintain that it does not nearly double it; and so it is with all kinds of stock—no two agree.

I freely admit and deeply feel that the subject is a very complex one, and cannot be thoroughly discussed even in a volume, much less in a single sheet, or by as humble a pen as mine. But let me indicate my view of the matter, and give a page from my own experience.

The economical feeding of stock is empathatically a matter in regard to which "circumstances alter cases," and the conditions are so perpetually varying that no set of rules can be devised, applicable to all cases. What is best at one time may not be good policy at another.

In the fall of 1851, living in Northern Ohio, I found myself possessed of 18 cows, with a small mow of hay, a short crop of oats, and a very small crop of very small corn, together with a small pile of very nice wheat straw. I had been in the habit for many years, of getting all grain fed to stock, ground, and had been strong in the faith that that was the only right way; but the excessively muddy roads, to which we were generally subjected there, and the labor and expense of grinding, were exceedingly irksome. I concluded to try an experiment.

I had a good stable for my cows, with stanchions and a tight floor to feed on. A gutter ran along behind to catch their droppings, and these were thrown out every morning for a fine sow to work over, who I expected would make an excellent living thereby. I was going to feed my corn unground, and the oats unthrashed, but hoped the sow and poultry would pick up the waste.

In the morning I fed each cow a sheaf of oats, at noon a little straw, and at night two or three small ears of corn, and a little more straw. This I did until about the first of March, when hay took the place of straw. Everything was licked up clean.

Now for the result. I expected grain in the gutter, but am satisfied that not a pint a day was dropped by the cows, and was compelled to feed the sow as before. The cows came out in the spring as bright and hearty as any I ever wintered in my life, and I was satisfied that the economy of the thing was all right.

The experience of that winter did not, of course, prove that grinding grain, under any and all circumstances, was a needless expense, but it did suggest to my mind one thought, and also illustrated the proposition that "circumstances alter cases." The thought is this—that the advantage of grinding and otherwise preparing food for cattle to be kept in store condition, was not as great as for those to be rapidly fattened. Ruminants are furnished with a very strong digestive apparatus, and if fed only sufficient to keep them in good fair condition, I wouldn't give any man much for all the waste he could gather from 100 head in a whole winter, fed on unground grain. In this section, "going to mill" is a serious business, for the millers generally contrive to "keep the grain and take the bag for toll." But I must close, and will only add that what I have said applies solely to store cattle, and that the case with cows giving milk is very different. HAWK EYE.

Keokuk, Iowa, Dec. 26, '59.

DADD ON THE DISEASES OF CATTLE.

This is a larger, more mature, and more perfect work than Dr. Dadd's excellent and well known "Cattle Doctor," and this is saying a great deal. It is not a revision and enlargement of his former book, but appears to be written wholly new. In arrangement it has some important advantages, the division of diseases being simple, natural, and well adapted to ordinary reference. For example, under the head "Organs of Respiration," we are furnished with what is known in relation to croup, inflammation of the lungs, consumption, bronchitis, catarrh, sore throat, &c. The "Diseases of the Digestive Organs," embrace hoven, diarrhea, inflammation of the bowels, colic, &c. Other diseases are similarly arranged under heads designating different parts of the system. There are a considerable number of valuable wood-cut illustrations.

Those who know Dr. Dadd are aware that he declares uncompromising hostility to the old cut-and-slash, scour and burn, blister-and-bleed system, and in some instances he may carry his assaults too far. But if he errs, it is a pretty safe kind of error on the side of gentle treatment and humanity, and can appeal to nature's restorative power. We have seen enough of diseases in animals to learn that much that is ascribed to medicine, takes place often as well or better under good nursing without medicine; and also, that sometimes remedies are of the utmost importance. We know of no writer on the subject who has discriminated better, if as well, between the two courses of treatment, than Dr. Dadd.

The work is published by Jewett & Co. of Boston, and C. M. Saxton & Co. of New-York, and is an indispensable book for every farmer who would understand well the management of his cattle, both in health and under the influence of disease.

VERTIGO IN HORSES.

EDS. CULT. AND CO GENT.—I have a horse strangely affected sometimes, and cannot find anywhere a description of the disease, although I have examined different books and papers, the Cultivator included, for which I have been a subscriber for the last 16 years. He is generally affected while being driven or used. The first symptoms I have noticed are shying, as if seeing something before him, and then staggering backward. This continues but a short time, when he either recovers himself and it passes off, or gets entirely down, (which he has done,) and after lying a few minutes will be apparently right again. It appears to me something like a blind stagger. He has been subject to these spells for some four or five years. Sometimes I see nothing of it for six months or a year together, and then again he may have them several times in the course of a year. Some say it is fits, but I do not think so. I was told a short time since that it was heart staggers. Is there such a disease? If, there is, or if you or any of your correspondents can give me information respecting the ailment of my horse, and a remedy if there is any, you will do me a great favor, and perhaps may benefit some other of your readers. A SUBSCRIBER.

This disease is not improbably the *vertigo*—which usually comes on while the animal is travelling, continues a short time, and then passes off. He often shakes his head, reels, staggers, and stops short. The disease is generally incurable; veterinarians have not been able to obtain a satisfactory remedy. The best treatment, perhaps, is very moderate labor, light diet, cleanliness and pure air, and good grooming. If any of our readers have been successful with its management, we should be glad to hear from them.

PRICE OF APPLE SEEDS, &c.

Will you or some of your correspondents, inform me through THE CULTIVATOR, what apple seeds are worth by the bushel, and at what market. I washed a few seeds out this fall, and if it will pay I would like to go into the business another fall to some extent. B. W. M. Montgomery Co., N. Y.

Nurserymen and dealers have formerly paid workmen three or four dollars per bushel for getting out seed, and sold them again at six to eight dollars. During the past scarce years for fruit, the prices may have been a little higher. The present year the apple crop has been very abundant, and we hear of apple seed for sale in large quantities in all quarters. We question if it will be all sold—in which case much will be planted perhaps by those not nurserymen, affording a full supply of seedlings in a year or two.

Our correspondent will probably do best to advertise his seed, offering them at a moderate price—but it will be important for him to convince purchasers that his seed are good, and not from fermented pomace, which is a most fruitful source of failure—a few hours fermentation in the heap being sufficient to destroy vitality.

On p. 204 of the Illustrated Annual Register for 1859, our correspondent will find a mode described by which two men can wash out three or four bushels of seed in a day, provided there is plenty of fresh pomace, and a good stream of water.

THE CULTIVATOR.

ALBANY, N. Y., FEBRUARY, 1860.

Among the old and valued agricultural journals of this country, which have borne the burden of improvement in the heat of the day, no one has achieved higher distinction than the Albany CULTIVATOR. Indeed, it has more reputation both at home and abroad, than any other similar periodical in the United States; and yet, one has only to send fifty cents to the publishers, Messrs. L. TUCKER & SON, Albany, N. Y., to obtain a copy for a year.

The above notice from the Southern Field and Fireside, meets our eye just as this number of THE CULTIVATOR is going to press. We quote it because, coming from the pen of the Agricultural Editor of that journal, it is a compliment that we cannot but duly appreciate.

It gives us pleasure to be able to say that the subscription list of this paper has shown a gratifying increase during the past month upon the corresponding month in 1859. While we have to express our renewed acknowledgments to many of its oldest friends, we have also to welcome as its supporters hundreds, to whose efforts we owe the receipt of club subscriptions for 1860 for the first time.

The present number will go forth as a still better witness of the improvements promised for the year, than its predecessor for January. May we not, therefore, ask of our friends to prolong their exertions a little in its behalf? Challenging a comparison as to cheapness of price, with an equal amount of printed matter of any kind whatever—entirely aside from any merits it may possess as an Agricultural Journal—we think it has claims which our farmers would recognize far more generally, if we had the means of bringing the subject to their more particular notice. This is precisely why and where we ask, so often, the aid of of our readers—in enabling us to reach with a kind word from them, an outer circle of hundreds and thousands, within whose acquaintance we have no other way of placing our journal and its objects.

We will send for gratuitous circulation, copies of the January and February numbers of this year to any person requesting them, or to any addresses that may be named. Those who are now members of clubs, can procure additions to clubs at club rates. To those who have not seen the REGISTER for 1860, we repeat our offer to send a copy postpaid, *for use in canvassing for subscriptions.*

⁂ PLEASE SEE TERMS AND SPECIAL NOTICES on last page.

◆

THE COMPREHENSIVE FARM RECORD.—We understand that C. M. Saxton, Barker & Co., 25 Park Row, New-York, have in press, a blank Record of the above title, which will be issued in January. It is to be a well bound folio volume of about 150 pages, with an explanatory introduction and a series of carefully prepared headings, arranged for entering every date and event useful for reference upon the farm—the results of each particular crop, and of each field, and every item useful for record and reference concerning domestic animals. The book is ruled and arranged for entering the results of twenty-five years, (from 1860 to 1884 inclusive,) and will supply every want, as to the means of arriving at a direct and intelligent understanding of the profit and loss of the various departments of husbandry. It is prepared by Dr. F. B. HOUGH of Albany, whose labors upon the last State Census have necessarily rendered the subject of Agricultural Statistics entirely familiar.

"ENGLISH DAIRY CHEESE."—We have used in our family, what is known as "English Dairy Cheese," for many years, from the dairies of Litchfield county, Conn., and the Western Reserve, Ohio, some of which have been of very fine quality; but a gentleman of our own state, who has been engaged for several years in making it, last week presented us one of 254 manufactured by him in 1858, of an average weight of 17 lbs., which we think superior to any cheese we have ever tasted; and that others appreciate its good qualities, we have evidence in the fact that the entire lot he made that year was sold to a dealer in New-York, at nineteen cents per pound. We have accepted an invitation to visit this dairy in June next, when we hope to furnish our readers with a full description of all its operations.

AN EARNEST APPEAL.—We ask our friends, after giving this paper a careful examination—if it meets their approval, and they desire to see an exclusively Agricultural and Horticultural Journal sustained—to make an effort to increase its circulation. It needs, and we think deserves, a much larger number of subscribers.

☞ Many people speak of English Agriculture as though some sudden wave from the Atlantic had washed out all the bad farming of that country, and as if there had followed in its wake a new system as exclusively good as the former had been exclusively bad. And as to Agriculture here, on the one hand we meet with groanings over worn-out soils, reduced production, older states deserted by their rural population, and new states following in a beaten track of exhaustion and ruin; and, on the other hand, with felicitations over wonderful evidences of progress, as though within a limited period a perfect revolution for good had been taking place.

No representation is a correct one which displays agricultural progress in Great Britain as anything else than the slow growth moulded by circumstances and developed by the increasing wealth, enterprise and sagacity, not only of the farmers themselves, but also, and perhaps primarily, of the manufacturing and commercial classes. And we are inclined to think that that picture of American farming would be most accurately drawn, which should show, how, with the increasing financial prosperity of the nation, every pursuit has felt an impulse, and how this impulse in our Agriculture has been turned to effect, just so far as improvement could be profitably pursued, and just so generally as there have been means in existence to diffuse a knowledge of the ways of improvement.

There can be no doubt that our fathers, frugal and industrious as they were, creditably as they lived both to themselves and to the country, were often guilty of the utmost profligacy, in their treatment of the resources of the soil; but it is equally true that, without the excuse their fathers had, too large a part of this present generation still adhere to the old furrow. The good seed, however, has been widely sown; the agriculture of those who never read an Agricultural Journal, or go to a Show, is affected more than they might care to own, by the example of some more intelligent neighbor, who does read and look about him, and if there are on the one hand reasons for a somewhat gloomy view of our present condition, there are also causes for encouragement and hope. This is the case because progress is a matter which is either *relative* or *actual.* The canal boat goes forward, but to the railway passenger just above, it seems as he whirls more rapidly on, to be just standing still; and so the marvellous growth of our cities outstrips the actual advancement our country is making in some measure at least, and at the same time Science and Invention have done so much more comparatively for other arts, that the aid they have really rendered to the farmer seems almost insignificant in the contrast.

That farmers should feel the need of improvement, is a great step towards accomplishing it. No evidence that they are constantly awakening to this necessity, is stronger than that afforded by the numerous attempts now going forward for the establishment of agricultural schools. Without detracting from the importance of such movements, it should still be borne in mind that they are designed to diffuse a knowledge of the principles on which the practice already adopted by our best farmers, is dependent for its success, rather than to instruct the young man in the actual details of the practice itself. If there is no "royal road to learning," still less is there any academical or collegiate machinery capable of converting an inexperienced lad either into a money-making merchant or a money-making farmer.

The truth is, that for the sake of their sons, if not for their own, our farmers should endeavor to render the farm itself a school of agriculture, allowing no year to pass without bearing witness to some efforts after immediate and tangible good, not less than to increase if possible the attractiveness of their pursuit to the young, by setting an example in seeking that information of which it presents so many channels. So long as men differ in the degrees of success they achieve, and in the constitution of their minds, so long we can all learn something from one another. It is surely an appropriate season, now that the New Year is fairly begun and the days are already lengthening for the seed-time of another harvest—to prompt every farmer who reads this sheet to the earnest inquiry, "How am I to make 1860 mentally and materially a better year than 1859?" Is there any one ready to claim that there are no means within his reach for the accomplishment of this purpose?

IMPORTANCE OF AGRICULTURAL PAPERS.—

> Our soil is as good, our facilities are as great, and our people as enterprising as any on the globe, and it only requires time with a steady improvement, not only to accomplish this, but in my opinion, go beyond it, [the production upon English farms.] Now, it is by communicating information—by a friendly interchange of intelligence, it can be accomplished—but it must be through our Agricultural Journals and Agricultural Fairs.
>
> I acknowledge myself as a practical farmer, deeply indebted to the CULTIVATOR and COUNTRY GENTLEMAN for information I have acquired from them for many years. The last year, particularly, I have been more than usually interested in reading a series of articles published in that paper, of information acquired by one of its Editors while abroad, which has added much to its usefulness and general excellence. We have many excellent Agricultural papers published in this State, and no farmer does justice to his profession, his intelligence, his family, or his farm, who does not take one regularly; for I have not yet seen the first man, except the most conceited and stultified, who cannot be made wiser by reading a good Agricultural paper.

The above extract from the Kinderhook Rough Notes, forms the conclusion of an interesting article on the "Progress of Agriculture," in which we can trace the pen of our friend, Dr. BEEKMAN, one of the committee in charge of *The Cultivator* when it was originally established as the organ of the old Agricultural Society of this State.—Dr. B. justly remarks, that "from the information diffused by this paper and many others now published in different portions of the State, a greater impulse has been given to Agriculture within the last 20 years, than in the whole century that preceded it."

SQUASHES.—Mr. GEO. W. BROWER has handed us on trial a part of a Squash, the seed of which was sent him, he states, a year or two ago, by a brother in Chili, South America. It was solid, and in as good order as if just plucked, and proved of first rate quality. ——— Friend I. W. BRIGGS supplies us with a sample, dried, of the "Honolulu Squash," which we have heretofore highly noticed. His price for the seed is "*One Dollar a Dozen* and no less, except as premiums for subscriptions."

N. Y. STATE MAP AND GAZETTEER.—Under the supervision of J. H. FRENCH, a large and very full map of this State, including "the location of school houses, churches, mills, factories, post-offices, hamlets, villages, lakes, ponds, streams, canals, railroads, hills, and mountains," has been published by R. P. SMITH. It is accompanied by a Gazetteer containing "a general view of the topography, geology, history, and institutions of the State, including the internal improvements, education, religion, legislative, judicial, and administrative departments of government, agriculture, manufactures, commerce, and navigation. Also, a brief history and description of every county, city, town, village, hamlet, and locality; all prepared from material collected by competent men, who have been sent through the State for the purpose. The map covers an area of about 36 square feet, and is engraved and manufactured in the best style of the art. The Gazetteer is a royal octavo volume of about 700 pages, illustrated by fine original engravings, on steel, of prominent points of interest in the State. It is well printed, on good heavy, white paper, and elegantly and substantially bound. These works are sold only by subscription. Price invariably $10."

SALES OF SHORT-HORNS AND SOUTH-DOWNS.—We are pleased to see that the demand for fine stock continues good, at least in some directions. Mr. S. W. Coburn has lately purchased from SAM. THORNE, Esq., "Peveril," and taken him to California. By the last steamer Mr. PATTERSON sent out two rams and five ewes, purchases from Mr. T.'s South-Down flock, and Mr. T. also forwarded at the same time a very fine yearling heifer to Mr. A. B. FORBES of San Francisco. Mr. D. MCMILLAN, Jr., Xenia, Ohio, last week started for his place from the same herd, "1st Duke of Thorndale," and a bull calf from "Buttercup 2d," and Mr. RICHARD BRADLEY of Brattleboro, Vt., purchased "Field Marshall" the week previously. California particularly, seems to be thoroughly awakened to the value of all kinds of improved stock. Every steamer now takes out more or less.

THE HOG CHOLERA.—If any of your numerous readers know what will cure or prevent the disease in hogs, called cholera, they would confer a great favor by letting it be known through the columns of the Gentleman. Numbers of hogs are to be seen lying dead on the road-sides. Mine are dying fast. They do not eat, but droop and die in a few days. No purging or anything unnatural, save, perhaps, in some instances after death, the blood seems to have settled towards the hinder parts, (or say from the loins back.) What the disease is, I do not know. Some of my neighbors call it cholera. The propriety of the name I cannot see. JAMES MOORE. *Bullitt Co., Ky.* [In visiting an excellent Delaware farmer a year or two ago, Mr. BRYAN JACKSON, of New Castle Co., he stated that a pint of tar put in the bottom of a trough, say 12 feet long, with a couple of ounces of flour of sulphur, proved very beneficial; an ounce of dissolved saltpeter was also put with the swill into the trough once a day, and chloride of lime sprinkled about their sleeping places. When the first trial of this remedy failed, a second was successful.]

WALKING HORSES—A SUGGESTION.—I would like to suggest an idea, which, if you approve, you can prepare an article, or get some of your correspondents to discuss, as to the propriety of a premium being offered at our annual Fairs, for fast walking horses as well as trotters. I think horses trained to walk fast would be a greater benefit to farmers in general than fast trotters, as almost all of his work has to be done with a walk. I once knew a man in Massachusetts, who, before the railroads were built, kept from two to four teams at work on the road, and never allowed them to trot at all, and made the distance in quicker time than his neighbors, who made their horses trot at every convenient place. He said that when a horse commenced to walk after a trot, he walked much slower than his common gait if kept on a walk, and thereby lost more than he gained. A. H. *Oak Creek, Wis.*

☞ We understand that Jos. JLUIAND, 2d, of Bainbridge, N. Y., has lately sold the North Devon bull "Young Metropolitan," to Wm. O. Williams, Esq., of Sandford, Broome Co., N. Y.

OBITUARY.—During the month of December last, our State Agricultural Society lost three of its more prominent members and officers in times past—B. B. KIRTLAND, for several years Treasurer, Judge VAN BERGEN, of Coxsackie, one of its early Presidents, and Judge TURRILL, of Oswego, last year Vice President for that district. Mr. Kirtland, as many were aware, had been for some time in failing health, which was indeed the reason why he relinquished a year or two ago, his connection with the Society. At the meeting of the Executive Committee in this city last week, a committee was appointed to prepare appropriate resolutions, which will appear in our columns when presented.

VERMONT STATE AG. SOCIETY.—At the annual meeting of the Vermont State Ag. Society, held at Middlebury, on the 5th of Jan., the following gentlemen were elected officers for the year ensuing:

President—E. B. CHASE, Lyndon.

Vice Presidents—Edwin Hammond, Middlebury; J. W. Colburn, Springfield; H. H. Baxter, Rutland; and Henry Keyes, Newbury.

Treasurer—Edward Seymour, Vergennes.

Secretary—Charles Cummings, Brattleboro'.

Directors—Frederick Holbrook, Brattleboro'; U. H. Penniman, Colchester; David Hill, Bridport; H. S. Morse, Shelburn; John Jackson Brandon; John Gregory, Northfield; D. B. Potter, St. Albans; Daniel Needham, Hartford; D. A. Bennet, Bridport; Elijah Cleavland, Coventry; and Henry E. Root, Bennington.

The Treasurer's report shwed a balance in the treasury of three thousand, three hundred and thirty-two dollars and seventy-five cents.

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THORBURN'S DESCRIPTIVE CATALOGUE OF GARDEN, FIELD AND FLOWER SEEDS for 1860, now ready, will be mailed to applicants enclosing a one cent stamp. Address. WILLIAM THORBURN, 192 Broadway, Albany, N. Y.
Jan. 19—w3tm1t.

THOROUGH-BRED NORTH DEVONS AND AYRSHIRES.—I offer for sale some fine young animals, imported and raised by myself, at reasonable rates.
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Jan. 19—w4tm2t. New-York.

200,000 PLUM TREES—Grown on a vigorous and hardy plum stock, of which we have the monopoly.

	Per 100.	Per 1000.
80,000 two year old, 4 to 6 feet,	$25.00	$225.00
100,000 one " " 3 to 4 "	20.00	190.00
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Address C. REAGLES & SON, Schenectady, N. Y.
Jan. 19—w8t.

SUFFOLK BOAR FOR SALE.—Thorough-bred—descended from the stock of John Giles—1 year old—200 pounds weight—$25.
WM. J. PETTEE.
Jan. 19—w2t. Lakeville, Conn.

THE CULTIVATOR for 1860.

"THE CHEAPEST AND THE BEST."

Now is the time to Subscribe.

THE First Number of the Twenty-seventh Volume of THE CULTIVATOR is offered with some pride to its old and new patrons. It will more than sustain our promise to furnish, this year, the

Cheapest and Best Monthly Journal.

The improvements we have made, and the very low price to which our terms are now reduced, can hardly fail to enlarge its subscription list very greatly, if our friends will exert a very little effort in its behalf.

Premium to Subscribers!

By reference to the Advertisement upon page 23, the reader will at once learn the character and scope of THE ILLUSTRATED ANNUAL REGISTER OF RURAL AFFAIRS for 1860—a *Twenty-five Cent Book*—which contains no less than *One Hundred and Eighty Engravings*, and which is presented to every Club Subscriber to THE CULTIVATOR. Our Terms are as follow:

ONE COPY CULTIVATOR, ONE YEAR,	50
ONE COPY CULTIVATOR & REGISTER,	75
TEN COPIES CULTIVATOR & REGISTER,	$5 00

☞ To the above Terms, Subscribers in the British Provinces must invariably add Six Cents per copy for the postage prepaid upon their papers.

◆

PREMIUMS TO AGENTS!!

I. For Ten Subscribers and $5.

To the Agent sending us FIVE DOLLARS for Ten Copies CULTIVATOR and Ten of the ANNUAL REGISTER, we will present an eleventh copy of both as a Premium.

II. For Twenty Subscribers and $10.

To the Agent sending TEN DOLLARS for Twenty Copies of THE CULTIVATOR and Twenty of the ANNUAL REGISTER, we will present *either of the following premiums:*

1. The COUNTRY GENTLEMAN (weekly) free for Six Months; or
2. A Complete Set of the ANNUAL REGISTER, postpaid, six years; or
3. Volumes of the CULTIVATOR, postpaid, for any Two Years since 1853; or
4. Two Extra Copies of the CULTIVATOR and REGISTER for 1860.

III. For Thirty Subscribers and $15.

To the Agent sending FIFTEEN DOLLARS for Thirty Copies of THE CULTIVATOR and Thirty of the ANNUAL REGISTER, we will present *either of the following Premiums:*

1. The COUNTRY GENTLEMAN free for One Year; or
2. Ten Premium Copies of the ANNUAL REGISTER for any desired year or years; or
3. Volumes of THE CULTIVATOR, postpaid, for any three years since 1852; or
4. Three Extra copies CULTIVATOR and REGISTER for 1860

IV. For Fifty Subscribers and $25.

To the Agent sending TWENTY-FIVE DOLLARS for Fifty Copies of THE CULTIVATOR and Fifty of the ANNUAL REGISTER, we will present *either of the following premiums:*

1. The COUNTRY GENTLEMAN free one year, and Twelve Premium Copies of ANNUAL REGISTER, being two complete sets, or otherwise, as may be desired; or
2. The COUNTRY GENTLEMAN, free, one year, and Volumes of CULTIVATOR for any four years since 1852; or
3. The COUNTRY GENTLEMAN for one year, and Four extra Copies CULTIVATOR and REGISTER for 1860.

☞ **Larger Premiums for Larger Lists.**

MEMBERS OF CLUBS may receive their papers at different Post-Offices.

SUBSCRIPTIONS FOR THE COUNTRY GENTLEMAN.

In obtaining the Premiums above offered, a subscription to the Country Gentleman, at $2 per year, will count the same as Four subscribers to the CULTIVATOR, and the subscriber to the Co. GENT. will receive one copy of the REGISTER.

SPECIMEN COPIES of both Journals sent on application, with Showbills and Prospectuses—also, if desired, a copy of the ANNUAL REGISTER for use in canvassing for Subscribers.

THE REGISTER POSTAGE FREE.—We shall prepay the postage on all copies of the ANNUAL REGISTER, without charge to the subscriber.

☞ **Every Person who receives this Paper is requested to act as Agent for our Publications.** ☜

LUTHER TUCKER & SON,
Albany, N. Y.

THE CULTIVATOR.

THIRD] TO IMPROVE THE SOIL AND THE MIND. [SERIES.

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"THE COUNTRY GENTLEMAN," a weekly Agricultural Journal of 16 quarto pages, making two vols. yearly of 416 pages, at $2.00 per year, is issued by the same publishers.

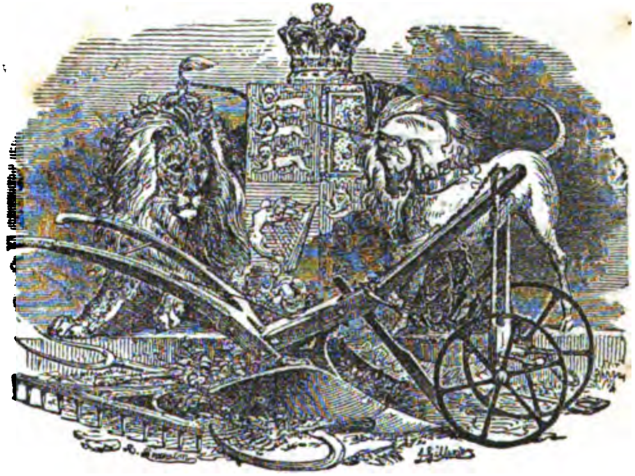
Editorial Notes Abroad.

No. XXVIII—More about Farming in Suffolk.

A Heavy Shower—Suffolk Horses—Folding Sheep—Embankment against the Wind—A Suffolk Plow—Donkeys—Tile Works—Pipe for Draining—Collars—Tile for Roofing—The Chillesford Farm—Blading a Wheat Field—Marsh Embankments—Suffolk Swine—Progress of Agriculture and Wages paid to Laborers.

The American climate is spoken of by English people with some horror of our sudden variations. I remember having met with a gentleman who had travelled in the United States, and who, on his return, narrated as one of the singular experiences of the journey, that a storm had occurred one night in hot weather, producing such a sudden change that his host for the time being, got up and came to his room, to supply him with an extra coverlet. If there was no extreme descent of the mercury to render this hospitable attention necessary while I was at Mr. CRISP's, it was not for the lack of a tolerably violent visitation one night from the thunder and rain. Though the sun was shining brightly enough as we breakfasted next morning, the paths and borders bore witness to as fine a washing as they would have been likely to receive on the banks of the Hudson; and during the sultry weather of the following week or two, I thought more than once most wishfully, how occasionally in such a time at home, a squall and fluster will abruptly warn us of anything but an unwelcome change, the big drops at length relieving a swelling sky, and beating thicker and faster as the falling procession hurries forward, apparently startling Nature herself, very much as a nervous man might suffer in getting an extra dose at his first shower bath. Truth to tell, I did not remain awake long enough to know how far this English shower would have realized such a picture, and all the rains I actually saw were of that gentle kind to remind one rather of a heavy mist that had borrowed the garments of a storm. I should be candid, however, and add that the summer was a dry one, and that neither fog nor mist nor rain anywhere befell, to impede my movements or lessen the pleasure of my visits.

The fact has already been mentioned that Mr. Crisp is an extensive breeder of the Suffolk farm or cart horse. He keeps about 30 brood mares, and has nearly an equal number in addition, including colts and stallions. A very good idea of the Suffolks may be obtained from the portrait given in another column (see p. 60,) of "Chester Emperor," accompanied by a brief description and some remarks as to their character. I was told that the market price for horses of this breed for working purposes in Ipswich, varied with quality, from $150 to $300, while that of stallions and brood mares runs from $500 to $1,500, according to the circumstances of the case.


Vignette representing a Suffolk Plow.

Of sheep, Mr. Crisp's South-Down breeding-flock numbered between eight and nine hundred. As to the system of *folding*, to which reference has been made, I should perhaps mention some further details. In our walk we passed through a field, just then receiving a dressing of manure in this way. Like the one I spoke of in my last, it had grown wheat in 1858, but there the succeeding crop was mangolds, while here they were just making preparations for sowing turnips, of which the general seed-time of the region is from the 5th to 10th July, or thereabouts. On the former, there had been a "stolen" turnip crop, and here a corresponding one of trefoil was obtained as follows:—The seed was drilled upon the wheat stubble after a harrowing, no plowing being necessary, and the field fed off by the sheep some time in autumn, and as late as Christmas, and again in spring until perhaps the 10th or 15th of May. Early in June the land was plowed and scarified, and then began the folding, 1,600 sheep being confined by hurdles in a space just large enough to accommodate them without too much crowding, and the hurdles being shifted from day to day until the whole surface should be thus treated. I find my notes deficient in not giving the size of the enclosure required for this number of sheep, but it appeared smaller than I was prepared to anticipate; nor am I quite certain whether any feed was given them to be eaten during the night—where the latter is the case, it is my impression that about two square yards of space are allowed per head. Stephens says that "the dressing thus given by 300 sheep is sufficient in a week for one acre of land, and is worth £3," ($15.) During the day, as already intimated, the sheep are at large upon the unenclosed gorse-lands.

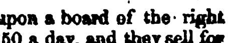
Along the side of the field in question, there ran an embankment of considerable breadth and height, together with the natural accompaniment of a ditch to promote the drainage of the soil. But the purpose of the embankment was to break the force of the wind over the surface of the ground, for the soil is so light as to suffer much from this cause unless some such precaution were taken. Arthur Young states that these drifting sands formed an extensive part of Norfolk, as well as bordering the Suffolk coast, before the introduction of turnip culture, and if I am not mistaken, the embankments here are of quite early erection.

A favorite plow in use in this neighborhood, has its beam erected at one end, even more than the handles are at the other, so that the two form very nearly a right angle. The accompanying vignette taken from the cover of Ransomes & Sims' Catalogue, will serve to give an idea of its appearance, although there represented in rather neater style than those one meets with at work. The draught is by a chain which will be seen attached to the beam just forward of the coulter, and in its shortness the affair reminds one more of our implements, while it is in striking contrast with the long, lithe, low-lying furrow-makers which one finds further on in the same pamphlet this picture is taken from, and which I found occupying all the sheds at the English show-yards. It much resembles what Loudon calls the Norfolk wheel-plow, to which, although "clumsy in appearance from the great bulk of its wheels and their carriage," he accords the credit of doing "its work with neatness in light friable soils," and of requiring "only a small power of draught."

After a tour among the stock with a farmer from another county, whose dialect was quite marked—his pronunciation of the word "bull," for example, being precisely in rhyme with the adjective "dull," but who was evidently a man of solidity and consequence where he lived—we set out for a drive of several hours, meeting, just as we were on the start, I remember, an errand-sent farm boy, bestriding one of those rare animals with us, which are in England and Scotland, as well as upon the Continent, so common and so serviceable for odd jobs on the farm, and for villagers who cannot reach so high in the scale of animal labor as the horse—I refer of course to that long-eared emblem of persistency and wisdom popularly known as the 'donkey.' A capital ass, it is stated, can be bought from $3.75 to $5, "in the prime of his age," while a horse of much value costs at least twenty times as much; "so long as there is a hedge-row overgrown with briers and thistles, so long as there is waste land furnishing a few tufts of rank and bitter grass rejected of other cattle, so long will the ass stick to his work, thrive, and cost you nothing."* Treated almost uniformly with more or less cruelty and ingratitude, it is capable of carrying proportionately a heavier burden than the horse. Mules, which especially at the south are common enough with us, do not seem often bred in England, and all the asses I saw were stunted little things in comparison with some of the fine jacks our breeders have imported for mule-raising, so that I do not think much attention is paid either to their production or improvement.

My host, among his other operations, manufactures tiles for his own use and that of other farmers in the vicinity. In calling at the works, not just then in operation, I found the kind of which most were made, to be pipe tile of 1½ inch calibre, sold for from $3 to $3.75 per 1,000, though latterly as a general thing, at the lower figure—a price too small I think he said, to admit of any profit to the maker. These pipe appeared to be in more general use than tile of any other shape, so far as my observation went, but Mr. C. also made horse-shoe tile, for which his price was $6.25 per 1,000 for the size two inches in the clear, and they are generally laid, he told me, upon a flat bottom tile, in lieu of the board which has here been most frequently employed for a bottom with us, when one is required—the price at which these are sold being $3.75 per 1,000. They are of the same length as the horse-shoe tile, and in laying are made to break joints with them. Collars, also, are sometimes thought necessary with the pipe—simply a portion of a pipe one size larger, cut to the length of several inches, and fitting around each joint. More than once I heard it advocated, however, that the continuity of the drain is quite as likely to be perfect without the collars as with them; in the former case the whole length of the tile resting upon the ground, while in the latter the length of the collar alone is apt to be actually supported.

Here they were also making what are called "pan-tile" for roofing—and, expressing some curiosity as to the process, a workman was called in to show it to me. The pan-tile, be it known, is of oblong shape, about 14 inches in length by nine in width, with one side curling up and one side curling down, so that the ends when laid have the appearance represented in the annexed figure. The clay is flattened out and shaped by hand upon a board of the right form. A man can make about 350 a day, and they sell for say $1.87 per 100. The under side has one or two little projections, and, in roofing, these catch upon slats far enough apart to support the upper ends of each tier of tile, the lower ends lapping perhaps four inches upon the tier below. No close boarding of the roof is necessary; the tile are laid with mortar as a security against leakage, and these slats or laths, tacked horizontally across the roof timbers, are their only support. Hollow tile of different shapes are made for the gutters and to invert over the ridge. I have spoken so much in detail, because tile is the almost universal roofing material one every where meets abroad. I really had some difficulty to explain to a gentleman with whom I was discussing the subject, what we mean by "shingles," and I realized how some of the simplest things in the world may not be very easily expressed in words on an impromptu trial. Pan-tile are made of different sizes, I should add, and what are called "plain tile," or perfectly flat parallelograms of burned clay, are also used, the latter provided with holes through which wooden pegs are driven, to answer the purpose of the projections upon the others, in keeping them in place.



Then we came to the "Chillesford" farm, containing another thousand acres, of which 400 are arable, 130 in marsh pastures, and the remainder in sheep walks. Among the stock upon it were 450 breeding ewes with their lambs, 80 rams and four or five stallions, besides the horses employed in working it. Here there are generally from forty to fifty bullocks fattened in winter, with the view mostly of their valuable services as manure-makers, and varying in number with the amount of straw produced for consumption. The cattle kept here were the Suffolk polled stock, several of which I mentioned as prize-takers at the Ipswich Show. A brief call at a third establishment, that of "Gedgrave Hall," concluded our rounds.

Among other notes jotted down during this visit, I find several rather disconnected items. A mixture of two bushels vetches to one of rye is sown for the horses in early spring, being ready to cut or graze in April. The fields in Suffolk are almost universally plowed in lands or "stetches," sometimes of 16 furrows width, or twice as wide as the drill and horse hoe are long—sometimes of only an equal width with the length of these implements. On some of the more luxuriant soils the wheat is "bisded," as I think the operation is called; we saw a field of 28 acres, which the sheep had fed quite bare in May, and just before it came into head the men went through it cutting off the tops as a precaution against its being laid. It was now promising a fine yield. After the sheep had had an early bite in this field, it was horse-hoed between the drills and 12 lbs. white clover seed sown per acre; after which, if I am not mistaken, the sheep again grazed it over. After harvest the stubble would be grazed, and as late in the succeeding spring as May 20, or June 1, when the clover would be permitted to come on for a crop of seed. Great care is taken to keep the low lands clean. Gangs of children are engaged as weeders and for similar tasks—so much per acre being customarily paid for their labor to the man who superintends it—who, of course, makes as much as he can out of the job, by employing his own children or agreeing with the parents of others in the neighborhood to secure the services of theirs.

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* H. D. Richardson.

Of the "Butley Abbey" farm alone, about 800 acres are drained at an average cost of $25 per acre. Mr. C. has two steam engines for threshing, &c.—one a seven, and the other an eight horse power. The "marshes" to which I have referred, are protected from the sea water by an embankment, with the usual system of drainage gates which let off the water when the tide is out, but when it rises shut by their own action to prevent its admission upon the ground. This dike extends more than twenty miles, and the marshes are very productive of wheat, as well as the best of grass lands.

With the Suffolk Swine, many in the United States are already somewhat familiar. The stock of the Messrs. Stickney and others in the vicinity of Boston, obtained directly from Mr. Crisp, has been quite widely disseminated through the country. It is classed as a "small breed," although it is difficult to say what standard of size justifies the application of the name to some of those I saw at Butley Abbey. Mr. C. was quite an exhibitor at the Royal Society's show this year, having received the second prize of $25 for a boar, the first being awarded to one of Prince Albert's celebrated breed, and having taken also both the first and third prizes in the class of sows. He has two distinct families of them, one of blacks, and the other of whites—the latter of which alone have been imported; he seemed, however, to be of the opinion that the black was the better "summer pig" of the two—better able to stand the heat, while the white is the more common, and equally good for cold weather.

Suffolk is a county of nearly 800,000 acres, in something like crescent form. Like the other eastern counties, it feels less the influence of the Atlantic in tempering the climate and rendering it moist, and the winds of the northeast in spring are spoken of as pretty sharp. The soil along the coast is mostly sandy, and there are some sands and fens in the northwest, but the central parts are of strong loam, with a substratum of clayey marl or occasionally of chalk. Draining was considerably in vogue at quite an early day, constructed with bushes or straw; claying and marling the sands was practiced, adds Loudon, "but sand laid on clay found of no use, or marl on clay, according to the old adage—

"Marle clay, throw all away;
Marle sand, and buy land."

The same writer refers to the practice of folding as "universal;" he also compliments the plowmen of the county as particularly skillful.

While writing out these notes, foreign journals bring to hand a lecture lately delivered (Dec. 7) by Mr. Robert Bond of Ipswich, in which that gentleman—who is the accomplished Secretary of the "Suffolk Agricultural Association," states a fact illustrative both of the progress of English Agriculture, and of the length of time which some of the English records cover,—that in the year 1387, 66 acres of wheat upon the Manor Farm of Hawstead in that county, produced 69 quarters of grain, and 26 acres of barley 52 quarters, 2 bushels—that is, the wheat at the rate of less than 8½ bushels per acre, and the barley at the rate of about 16 bushels. The present average production of wheat, on the other hand, is 28 bush. per acre.

The wages which laborers receive range from nine to twelve shillings per week—say from $2.25 to $3—but I think a good many operations here, as elsewhere, are paid for by the job.

It was while we were undergoing on this side the water, our annual relapse of patriotism—while our church bells were ringing, processions moving, and gunpowder proving itself most vociferous of revolutionary reminiscences, that the interesting observations were made which I have been endeavoring to record above—greatly I fear to the loss of the freshness and connectedness they possessed when gathered. And not until I had bid good-bye to the kind hospitalities of my friend, and seated myself in the evening London train, had it occurred to me, how that this "Fourth of July" was rapidly passing by without salute or celebration, and, worst of all, in actual intercourse of the most amicable kind, with one of those "Britishers," whom some charitable travellers have represented us as hating so vehemently. L. H. T.

Great Timothy Hay Crop--Pasturing Meadows.

Mr. Eph. Gould, as certified at the Washington (O.) Co. Fair, raised the past year eight thousand, five hundred and forty pounds of Timothy hay on a single acre—cutting the amount at once mowing. The aftermath, on the first of October, was estimated equal to three-fourths of a ton. Mr. Rathbone, of Marietta, who communicates the above to the Ohio Farmer, is of the opinion that "the secret of this great crop lies in the fact, that Mr. Gould *never pastures his meadows.* The aftermath protects the stools throughout the winter, and the grass gets an early start in spring. In case of a drouth the aftermath serves as a mulch, and under any circumstances makes a good manure. Meadows that are never pastured, will last much longer than the pastured, besides giving a larger yield."

It may be questioned whether pasturing meadows is as objectionable as Mr. R. believes, but no one can doubt that Timothy meadows are injured and often ruined by close pasturing. The well known fact that this grass has a bulbous root, generally lying just above the surface of the ground, which is often broken or eaten by grazing animals, would suggest a caution to farmers against pasturing Timothy meadows or depending on Timothy for pasturage to any great extent. But there are some evils attendant on a heavy growth of aftermath allowed to remain on the ground, as all farmers know.

Probably the above crop of Timothy hay is the largest ever taken from an acre at a single cutting. The Ohio State Ag. Society awarded recently its highest premium for six tons and 1209 lbs. of hay grown on two acres.—Three tons is as great a crop as often produced—and the average hay crop of the country is usually not far from one ton per acre. That it might easily be doubled, we verily believe; and there is no item of farming which more needs or would better repay attention, than the grass crop.

KING PHILIP CORN.

The King Philip corn I suppose is named after Philip the celebrated King of the Narragansett Indians, who caused large quantities of corn to be raised and stored, preparatory to his great struggle with the colonies, and enjoined all the tribes of Indians that were in league with him to do likewise, thus providing the sinews of war; for corn, not money, was the sinews of war then. The kind of corn, or one of the kinds of corn he planted, was a rather large, white, eight-rowed variety, something like the smutty white, but larger.

The farm of one of my neighbors was purchased by his ancestors of King Philip's father, when Philip was a boy. Corn was growing on the farm at the time of purchase, and it must have been planted by Philip or his father, or by their direction. The same kind of corn is planted to a considerable extent in this vicinity now. On that farm the seed corn has never been changed.

Plymouth Co., Mass. E. Willis.

CULTURE OF GROWING WHEAT.

A writer in the *Mark Lane Express* argues that "of all crops wheat is most in need of tillage during its growth; for the climate requiring it to be sown in autumn, that it may get a sufficient start in spring to give time for filling and ripening the ear, there are many months longer than are taken by any other crop, in which the efficiency of the preparatory tillage may be lost, the fine particles of soil coalescing again, and excluding the atmospheric supplies of nutriment; so that long before the crop has reached maturity, or come to that critical period of the setting of the bloom and swelling of the kernel, (when the plants need "good keeping," or will fail in fecundity,) the land is almost as solid and impervious as it was before the seed-bed preparation began."

Culture is only practicable under the drill system, and the shallow tillage generally given in England under that system is found profitable, but the writer above quoted, would have deeper and more thorough culture, like that practiced under the Lois Weedon system of wheat growing, which is there found to go far to maintain the fertility of a naturally good soil without manure, as recently noticed in another place.

Underdraining with the Mole-Plow.

We find in a recent Ohio Farmer an account by J. M. Trimble of Highland, of quite an extensive experiment in underdraining prairie land by the use of open drains, and ditches cut with Emmerson's Mole Plow. Thinking it will be of interest to our readers, we condense the main portions thereof below.

The year's operations were confined to 230 acres of prairie land on the west bank of Rattlesnake creek. Mr. T. first laid out with an engineer's level 685 rods of open ditch, at 80 rods apart, varying in depth from 4 to 6 feet, and in width from 6 to 8 feet, allowing for slope of banks 1¼ feet, to one foot in hight, which was let by contract at 65 cents per rod, and finished in October, 1858. The underdrains were cut in March, April and May; first laid off with the level, but more with the view of tapping the wettest portions of land between the open ditches, than a regard to straight lines, or thorough underdraining. In this way, with the ditcher, two yoke of cattle and two men, in sixteen days we put in 1,500 rods of underdrain, at a depth of three feet four inches, and a cost of $65.

The account states that "at the time of running the mole plow, the surface of the ground was covered with water, from one to six inches deep. The surface soil to the depth of from one to two and a half feet, is a black clay, or loam, rather a compact, tenacious soil; the subsoil is a close, compact, yellow clay, to the depth of from three to five feet." The sod was then broken up, or turned over, from six to eight inches deep, harrowed (200 acres of it,) and then planted to corn, finishing the 200 acres on the 23d of May. On the memorable fourth of June it was up from 6 to 16 inches high, but on the morning of the 5th, all lay flat with the ground. It was then plowed up and replanted, and the product under these circumstances was 60 bushels per acre. The 30 acres planted last, on the sod and without culture of any kind, produced 40 bushels per acre. In relation to the working and success of the experiment, Mr. Trimble remarks:

"The underdrains all performed their work well up to the middle of July, when they began to fail, and by the first of August were perfectly dry. I have been on the farm from the 3d up the 25th of November, during which time we have had several hard rains; and I have examined the outlets to all of the underdrains, which, without a single exception, are passing off large quantities of water. From a close observation during the summer, I am satisfied that the underdrains were quite as important to the growing crop during the drouth, from May to September, as they were in carrying off the surplus water in the spring; and I am equally certain that the increase of crop, resulting from draining is all of 20 bushels per acre, which would leave the account stand thus: Six hundred and eighty-five rods open ditch, at sixty-five cts. per rod, $445.25. One thousand five hundred rods of underdrain cost $65. Use of ditcher, wear and tear, $25.75. Entire cost, $536. Cr. by twenty bushels of corn on two hundred and thirty acres, gives four thousand six hundred bushels, at 25 cents, $1,150; showing a profit of $626 in favor of the mole plow in a single year."

In regard to other experiments which have proved failures, it is remarked:

"The mole plow has been condemned from the fact of improper use, not procuring sufficient outlet, running the ditches too shallow, and failing to reach the clay sub-soil with the mole. I have no faith in the use of the implement without a clay sub-soil for the mole to operate in. Otherwise the aperture made by the mole will cave, and fill up."

Strawberries Mulberries and Grapevines.

Eds. Cult. and Co. Gent.—I am intending to set out quite a quantity of the Wilson's Albany and Hooker's strawberry plants next spring, and have thought of adopting the mode of culture of alternate strips. I wish to inquire if these two varieties do well when cultivated in this way? Hovey's Seedling does not, for a very large part of the young plants formed in the preceding autumn will not bear any fruit. How is it with the Albany and Hooker in this respect? (1.)

I also wish to inquire as to the merits of Downing's Mulberry. Is it a fine fruit worthy of general cultivation, hardy and productive? Are not birds fond of mulberries as well as cherries? (2.)

Can you inform me how grapevines are grown from single eyes in the open air? Also how to raise extra sized layers for immediate bearing? (3.)

Is the method of propagating the Blackberry described in the December number of the Cultivator, equally good for the raspberry? (4.) Subscriber.

1. We have found the preceding year's plants of the Wilson and Hooker, but more especially the Wilson, to produce well the next spring, but not so abundantly as their second year. When they do not the first year, thin them out, and they will make amends the second year.

2. We have found Downing's mulberry hardy, but cannot speak personally of its merits as a fruit, nor of the fondness of birds for it.

3. Grapes from eyes are usually grown in propagating houses or hot-beds, and not in the open air. Grafting is the best for immediate bearing.

4. Both the raspberry and blackberry are thus propagated, but the raspberry does best in a propagating house, with a little bottom heat.

Green Corn Pudding and Succotash.

Will you or some of your subscribers, inform me how to make corn pudding of green corn or roasting ears—also how to make succotash. H. G. P. *Butler Co., Pa.*

Grate the green corn from 24 ears—to this add 1 quart of milk and 3 eggs, 1 tablespoonful of sugar, half a teaspoonful of salt. Now, this must be varied according to the age of the corn; if the corn is old add more milk or take less corn. Bake in pie dishes, till of a proper custard consistency.

Succotash is of two kinds—green and dried corn. For the first, boil the beans first, as they need more cooking, then shave the green corn off the cob, and boil it with the beans. then season to taste with butter or cream. With dry corn, the corn must be soaked until it is thoroughly swelled out tender, and then treated as the other.

[For the Country Gentleman and Cultivator.]

CULTURE OF THE ONION.

Eds. Co. Gentleman—There is in the "Co. Gent." an inquiry for "a good article on the Culture of the Onion." The answer comes in an article by J. W. Proctor of Essex, Mass., but as the onion is very largely cultivated in this vicinity, many farmers raising from two to twelve acres, and as our mode of cultivation may differ somewhat from that of Mr. P., I have concluded to write you a short article on the subject.

1. The ground selected for onions should be the *best* on the farm, as free from stones as possible; and it should be made very rich by the application in large quantities of the best manure to be had. We have lately practiced plowing in our manure in the fall, and then in the spring we harrow thoroughly, and give a top-dressing of some bought manure—guano, bone-dust, or whatever we prefer. In this way we can sow our seed from one to two weeks earlier than if plowed in the spring, and experience shows this to be very important. Whether plowed in spring or not, the ground must be well harrowed—every stone or any other obstruction picked carefully off, and then made very smooth and level with a hand rake. Extra care in the preparation of the ground is amply repaid in the after cultivation.

2. When the ground is ready, we sow our seed, using a small machine which sows two rows at a time as fast as a man can walk. This machine is made near here, and I have never seen it in the agricultural stores. To the onion grower it is invaluable. The seed after being deposited in the drills, is covered by *pushing* a common hoe along the row, very lightly and carefully. The covering is sometimes done by a board attached to the machine, but I do not think in as perfect a manner.

If the weather is favorable, the plants will be up in about three weeks, and then the labor of cultivation begins. Our rows are *twelve inches* apart, and we use, for the space between the rows, very narrow hoes, about nine inches wide, and so narrow that the earth will run freely over without *moving along* in front. There have been two machines contrived during the past year for hoeing onions, and they promise to save a vast deal of labor. The weeding is done by hand, the boys passing *over* the row on their knees, and taking out the weeds with a small hoe an inch or two wide. These tools are best made from a thin saw plate, and should be kept *bright*. They are very handy about the garden. The weeding should be continued until the crop is fit to pull, as the injury done by going through the onions when large, is not half as great as that caused by the weeds going to seed for next year. When ripe, the onions are pulled and left on the ground to cure. They should be thoroughly dried, and then, if stored in a cool, dry place, they will keep without much trouble the whole winter.

The average crop with us is about 500 bushels per acre, but 800 are often grown. And the average price is $1.50 per barrel, from which it is easy to see that with a good market, and thorough cultivation, the crop can be made very profitable. Edw. J. Taylor. *Southport, Conn.*

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[For the Country Gentleman and Cultivator.]

Driving Bees---Bee-Hives, &c.

In the Country Gentleman of Jan. 5, I noticed the inquiry "S. H. S.," for a method of driving bees from one hive to another. He asks if it is possible? It is, and very easily done. The simplest mode which I am acquainted with, is to take the old hive a short distance from its usual place, and put an empty one instead. Having protected your hands and face in such a manner that they will not be able to sting you, then jar the hive—the bees will fly out, dart back to where the hive used to stand, enter the new one, and soon become domiciled in their new abode. This operation I think is sometimes very beneficial, especially when the comb has become old and dirty—it seems to have the power of rejuvenating the old swarm. When they have about all evacuated the old hive, it can be carried into a dark room or cellar, being careful to have a small hole through which a little light can penetrate—the remaining bees will fly to this, and thence find their way to the new home. This plan is a very good one for clearing box honey of bees.

Another plan is to invert the hive—set another one directly on top of it, adjusting it in such a manner that the bees cannot escape without getting into the new hive. Then breathe tobacco smoke into the bottom of the old one, gently tapping the hive at the same time—a few moments will suffice for the bees to clear the old hive. Care must be taken not to apply the fume too strongly, or it will make them so torpid and stupid that they will not stir, resisting all efforts to dislodge them. I think this is the reason why many fail in driving them from boxes with tobacco smoke—they are rendered stupid before they are aware of what ails them. Bees naturally have a strong antipathy to tobacco smoke, and will always get out of the way if a chance is given them.

Still another method I heard spoken of the other day. It does not differ materially from the first however. It is this—Cover the face, &c., to prevent stinging—then place a rope of good length around the top of the hive from which you wish to expel the bees—set it off the plank—place another instead—and then carefully place the one containing the bees on your back, holding it to its place by the rope. Then take a stroll out in the lots—a few turns will suffice to dislodge them. I should not prefer the last method for several reasons not worth mentioning.

My father keeps about 40 or 50 swarms of bees. The hive which he uses—got up by himself five or six years ago—is very well liked by those who have seen it, and used by a good many. It is different from any description that I have ever seen. Perhaps it would suit the ideas of some of your readers, and I will give a short description of it. The proportions of the hive are as follows: Height two feet—one foot square clear inside—space in top for box 9 inches high—leaving 14 inches space below the box and partition board for the bees to form comb in. Door in front, 20 inches, is put on 4 inches from the bottom. If put any nearer than that, the bees when hanging out, are apt to get on it, thus hindering the opening of the door. Ventilator in the back of the hive near the top. An auger hole is made through the partition board for the purpose of letting the bees into the boxes. A glass 9 by 12, is placed in the lower part in front, for the purpose of examining into the wellfare of the bees. He always planes and paints them.

The dress he has for the purpose of hiving the bees, is made of coarse book muslin or musqueto netting, or anything which will admit of a free circulation of air, and will prevent the bees from getting near his face. It should not be so close as to obstruct the sight. It is made something in the shape of a shirt, with sleeves, and reaches down well in the waist. The upper part is entire, with the exception of a hole of three or four inches in diameter. It is drawn on over a hat, the crown of the hat protruding outside. The brim of the hat keeps it clear from the face. This, with the addition of a pair of gloves which come well up the wrist, when they are well tied on, make a rig which costs but little, and one which any person, when they have them on, need have no fear of bees.

There are quite a number of bees kept in this section; but very little pains is taken to house them, however—are generally left out without any protection whatever during the winter. In the spring the colony comes out very much weakened. This I think is one cause of so many failures, together with carlessness in spring when they are hatching. There are exceptions to this rule however, some taking excellent care of them. Still bee-keeping here as an art is in its infancy.

Bees situated a mile from the lake, which is 2½ miles wide, often cross it for the purpose of getting honey. E. A. King.
Cayuga Co., N. Y.

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Rensselaer Co. Ag Society.—The annual meeting of this Society was held on the 17th inst., for the exhibition of winter crops, and for the election of officers for the ensuing year.

The Society resolved to purchase six acres of land lying between Troy and Lansingburgh, at $300 per acre, for the permanent use of the Society, and to make a sale of its present property in Lansingburgh.

The Hon. George Vail of Troy, was elected President. The retiring presiding officer, L. Chandler Ball, Esq., delivered an eloquent address, for a report of which, and of the proceedings of the Society, we are indebted to the "Troy Times." Since the last meeting two of the earliest friends and most efficient officers of the Society have died; B. B. Kirtland of Greenbush, and Joseph Hastings of Brunswick.

[For the Country Gentleman and Cultivator.]

OSAGE ORANGE FOR HEDGES.

EDS. CO. GENT.—The question naturally arises, with what shall we fence our fields a century or even a half century hence? When we look over the map of North America, we find that a considerable portion of this vast territory is comparatively destitute of timber. From the western line of the State of Indiana to the eastern slope of the Rocky Mountains, a distance of some twelve hundred miles east and west, and south from Kentucky, including Missouri, Kansas, Nebraska, Iowa, Illinois, and a part of Wisconsin, timber in this vast region is greatly in want. The eastern States once were heavily timbered, but the stately oak, with his vast list of associate neighbors, are, to a great extent, gone; so much so that many of the inhabitants are now for purposes of economy, and to save the small remnant of timber left, compelled to use coal for fuel from the mines of Pennsylvania. The question is, what shall we do for materials to guard our crops from our domestic animals? In many locations in the eastern States, a supply of stone is at hand. With stone laid in wall a good fence is made; but in the vast northwest we have neither timber nor stone.

It was believed by some in this region that a fence could be made of a ridge of earth well sodded, by carefully cutting up the prairie sod into squares as large as a man could lift, then throwing up the dirt and making a ditch about two and a half feet wide and two feet deep, then over the embankment placing the sod. These fences were of short continuance as the sods seldom compacted and grow. The heavy beating rains and frosts of winter soon made gaps in them, and after a year or two became unsightly and useless, affording a fine place for cattle to cut their pranks in, making the dust fly with their horns. Thousands of miles of this sod fence have been made on our open prairies, but now seldom a trace of them can be found.

The heaviest and best trees of our timber have been felled, worked up into rails or used in building, and are now nearly extinct. For the last few years, as the west has rapidly increased in population, posts and boards have been mostly used for fencing. The new settler could not wait to raise a hedge—his crops must be protected, and as posts and boards were the most ready material, they were chiefly used. When the pines of the north are gone, and the supply of timber from that source fails, I again ask, with what shall we fence our farms? Nature has furnished us with a sure and reliable material, viz.: the Osage Orange or Maclura shrub.

Some fifteen years ago, Prof. TURNER, of Jacksonville, in this State, and a few others, procured seeds of the Maclura from Texas; planted them, and tried the experiment in hedge growing. Their labors were crowned with success. Soon there was a great demand for seed, prices ranging from $20 to $30 per bushel. The seeds were sown in nurseries, and at one year's growth, packed and sent to purchasers many miles distant at $10 per thousand. To encourage the growth and to induce people to try the hedge, the State Ag. Society offered liberal premiums for hedges at different ages of growth. The County Societies also rewarded the owners with suitable premiums for best hedges. We do not say that all who *tried* the plants succeeded. There are men who have the best of stone at hand, who cannot or do not lay them into a handsome and compact wall. Neither do we find a good substantial rail fence made, even where the rails are of the best kind, or a good post and board fence made even out of good materials. Some ment *wont* do their work well; they will make a balk or a botch of anything they undertake—so with hedge growing—they will not do it right even if a good pattern is on their first neighbor's farm. In growing an orchard, how many fail? We cannot, therefore, expect that all who attempt it will succeed. To meet with success, as in everything else, the work must be done *well*.

As I have had some experience in hedge growing, I will give it to your readers, hoping that I may induce others to *try*, for the question is still before us, "with what will we fence our fields?" Twelve years ago, one of my neighbors bought 2,000 plants of one year's growth at a cost of $10 per 1,000. These plants, after being assorted, were set out in a line of about 100 rods, and carefully cultivated and trimmed for three years. Since then it has been cut down but once, leaving the main body and limbs about five feet high. Now it stands full ten feet high, and has been a perfect barrier to all quadrupeds since the third year after setting out. Others in this neighborhood soon followed, but had to send some 200 miles to get the plants. Traveling agents were employed to scour the country and contract at prices from $6 to $8 per 1000, delivered, with full directions for setting, trimming, &c. Some furnished plants, prepared the ground, set out and cultivated for four years, and then by previous contract received 80 cents per rod. Some of the best hedges in our county are those as last described.—Now thousands of miles of very excellent fence are stretched over our western lands.

As the seeds were all procured from Texas, a trade of considerable importance sprung up. Now the seeds can be had at from $12 to $16 per bushel anywhere. No doubt there were many worthless seeds sold, but now, those who are acquainted with them, can readily detect the spurious or defective. We know large nurseries, some growing from 100,000 to many millions annually, who sell at from $1.50 to $2 per 1000. I understand that Messrs. Overman & Mann, near Bloomington, in this State, the last year planted over 100 acres with seed. I have not tried to raise the plants from the seeds but once, and then met an entire failure. The safest way, I consider, is to buy the plants of the nearest nursery, carefully assort them into three classes—the best and largest set out together, and also the second size by themselves, and the third class should be used for the stove.

After the plants are procured from the nursery and assorted, with a spade make a trench some ten inches deep—make a grout of loose dirt and cow dung, thin enough to well cover all the roots—then place them in the trench and cover about two or three inches above the top of the roots, care being taken to have all the roots well bedded in dirt. After the buds are well open, and the leaves begin to appear, transplant. The ground should have been plowed in the fall about eight feet wide, by leaving the last furrow in the center at least a foot deep. In the spring commence in the center and throw the dirt all back, leaving a fine mellow bed to receive the plants. It will do to prepare the ground in the spring. By either time, be sure to have a finely pulverized soil to receive the plants. Draw a line, no matter how long, and fasten it to its place by driving hooked stakes over it; then with a spade, which is thrust at least ten inches deep, place the plants which have again been grouted and assorted, after being taken out of the sprouting bed and put in their places. A man with his spade, and a boy to put in the plants, can set half a mile in a day. While setting, the spadesman tramps the dirt carefully, but not too tightly, about the roots. The plants should be set about two inches below the place where they grew in the nursery, and about six inches apart in the row. All the yellow part of the root should be out of sight.

If there are low moist places over which the hedge is to pass, raise the dirt some two or three feet high and keep the two ditches cleaned out that the water may have a free chance to run off. If a low place is to be crossed, where water is liable to stand, bring the hedge raised on the embankment to the center of the low ground, then cut a deep ditch, sufficiently deep to carry off all the water, or under drain, which is better. At the opening in the ditch set two or more posts and board up. It is very necessary that this care be observed in crossing low ground, as the roots of the Maclura run almost straight down and very deep—and they will no more thrive in a wet subsoil than an apple tree will. As a general thing, we, in this region, have been too anxious to have a long unbroken line of hedge by setting plants without proper care over the low places, but to our sorrow have many gaps more wide and hedges more defective, by neglecting to give the roots the advantage of a dry foothold.

The plants after being set, are carefully cultivated and not trimmed the first year. Before the ground freezes in the fall, with a plow throw up four deep furrows on each side; the dirt being well thrown in among the plants. Then with a hoe, level the dirt about them to the amount of some six or eight inches—clean out the drains on both sides, particularly at the place where the hedge crosses the ditch, if any. The hedge is now ready for winter. Straw and brush about the roots covered with dirt is good for protection, but not safe, for it affords a winter's home for mice. In the next spring, not before the middle of May, (for the Maclura is slow and late in leafing out,) throw back all the dirt placed around the fall before, and trim and cut down to within about four or six inches of the ground; cultivate well during the summer. In the fall bank up as before. In May next, remove the dirt and cut down, leaving the hedge about ten or twelve inches high. In June (about the middle,) the plants have a little over two years growth in the hedge; cut back a little and shape the hedge, leaving it like a boy's top turned upside down; it will now be about 16 or 18 inches high. In the fall bank up and clean out the ditches as before. If the frost gets under the roots in the low lands, there is danger of freezing and heaving out. In the spring of the fourth year's growth, trim, leaving the hedge about two to three feet high, (all of an even height at top,) cultivate as before, and in Sept. sow white clover seed on each side.

You now have a fence that will guard your crops from all intruders. When openings are left for gates or bars, place on either side a good substantial post; if not done, the cattle will break down the plants, or the wagon wheels under the management of a careless driver, will break them down. When your gate is ready to be hung the hedge should come close up to the posts. This makes all snug, tidy work. After this, either late in the fall or in spring, trim and preserve the hedge in shape of a boy's top with bottom upwards. In growing a hedge, it is very important that every part of the work be *well done*; more so, perhaps, than for anything else. If a fruit tree fails in any way it can be replaced by another; but when gaps occur in a hedge by being trampled down by cattle, or frozen or drowned out by standing in low wet places, you cannot well repair it. To have a hedge with occasional brakes and imperfect places in it, is truly an unsightly and a very unpleasant affair. If all the rules above laid down are carefully observed, all may fence their farms with this invaluable shrub. It is evident, from past experience, that in all soils, in latitudes where the apple tree flourishes, the Osage Orange or Maclura will, if properly cared for, FENCE OUR FIELDS successfully. C. G. TAYLOR.

Hazlitt, Rock Island Co., Ill.

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Bees for California.

The shipment of bees for California and Oregon has been a brisk business for a few months past. One hundred dollars a stock—the price paid—for good ones, has sent out a host of speculators. Our valley of the Mohawk has furnished a goodly share. From between Utica and Schenectady there have been sent off over one thousand hives. M. QUINBY & Co., St. Johnsville, furnished five hundred and twenty-two. The greatest number shipped at any one time, was the 5th Jan. A loss of from fifty to eighty per cent attended the first attempts, mostly for want of room and ventilation in the hot climate they passed through. A sheet of wire cloth was simply tacked over the bottom of the hive to confine the bees, and resulted in destroying the most of them by heat and suffocation An approved and more successful mode now, is to make a box or cage of wire cloth large enough to hold nearly all the swarm, and put it over the bottom or top of the hive. When the interior of the hive becomes too warm, most of the bees will leave and come out into this box, where they are much more comfortable, as the air can freely circulate through it. They are placed on the upper deck of the ship, and at the same time kept as much as possible from the light. It would seem that an effort is being make to extend this trade into other quarters. Mr. Q., we understand, has filled an order recently for some to go to South America.

SAVING GIRDLED APPLE TREES.

EDITORS COUNTRY GENTLEMAN—I have an apple tree about one inch in diameter, which has been completely girdled by mice for two or three inches from the ground. Can I not save the tree by cutting a square piece out from one edge of the bark to the other on both sides of the tree, and then fit in other pieces of wood with the bark on from a limb or tree of the same size, tying them fast and covering the whole with a coat of wax? If you know of a better way, please inform me through the columns of the Cultivator. A SUBSCRIBER.

The mode described by our correspondent has been long practiced with success; but it requires great care in fitting the parts accurately, and especially in cutting off the inserted pieces to exactly the right length. A much easier, more certain, and far more expeditious mode is described in the first vol. of Rural Affairs, p. 333, which we [illegible]

A number of young shoots or portions of the branches of apple trees are first provided, and as they are wanted, are sharpened in the form of a wedge at each end, being long enough to connect the upper and lower portions of the bark separated by gnawing. A chisel, the breadth of which is about equal to the diameter of the shoots, is then driven into the bark, (say half an inch from the gnawed edge,) both above and below, and the prepared or sharpened shoot is then firmly pressed at each end into the cut made by the chisel. This is easily done by first bending the shoot outwards at the middle, so as to allow each end to enter, and then crowding it in again. The place must be then well waxed. The *edge* of the chisel must be placed so as to make a horizontal line in the bark, and then be driven nearly vertically upwards or downwards for the upper or lower parts of the bark. When the shoot is placed in the cut thus made, some portions of the line between the bark and the wood in both tree and shoot, must necessarily coincide, and as a consequence, the two parts almost invariably adhere and grow together—there is scarcely ever a failure. Fig. 1, represents a girdled tree; Fig. 2, the same with the shoots inserted; and Fig. 3, is an enlarged section, showing the position of the sharpened end of the shoot when in its place. The great advantage of this mode consists in the rapidity with which the work may be done, and the difficulty of displacing or knocking out these shoots when once in. There should always be a few stout stakes driven around each tree, to keep off plows, harrows or cultivators, which might otherwise strike the tree and loosen these shoots.

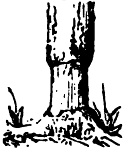
FIG. 1.

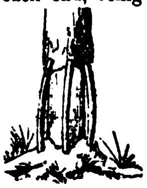
FIG. 2.

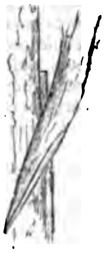
FIG. 3.

The shoots used were about one-fourth to one-half an inch in diameter when applied, and they had already tripled their original size. Probably larger ones would be better, and the more numerous they are the greater will be the security, and the sooner they will grow and unite in one solid trunk.

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[For the Country Gentleman and Cultivator.]

Wintering Cabbage.

I have practiced for four years, the following mode of wintering cabbage, and it has proved so well, I give it for the benefit of others. My cabbage are left out till there is danger from frost. The heads are then cut off, with a few coarse leaves, and if winter does not seem to be upon us, thrown into heaps, and covered with litter of some kind, till winter seems to be coming in earnest. Then the cabbage are put in heaps by placing them on the ground—three for the bottom course, two for the second, and one for the top. Make your heap as long as you wish—pack them close by putting largest at bottom, and keep the stem end up Cover ten to twenty inches or more with earth, without any straw. The earth must be in proportion to the frost. A little frost will not hurt them if the cabbage are not taken out till the frost has left them.

A. S. MOSS.

Farm Improvement—I. Size of Fields, etc.

Progress in Symmetry, Fertility, and Capacity for Profitable Cultivation Desired--Importance of Well-Planned Subdivisions—Rules for Laying out Farms, by J. J. Thomas—What shall Determine the Size of our Fields?—Amount of Manure available, should do so under a System of Mixed Husbandry—A Case Supposed and a Plan Proposed—One Field at a Time, and Thorough Work with it—Clear, Fence, Drain, Manure, and Plant to Corn—The Evils of "Fields too Large for the Manure"—Why Corn should be a First Crop—Hints on the Rotation to Follow, etc.

"How can I improve my farm—how can I increase its symmetry, fertility and capacity for profitable cultivation?" asks the progressive farmer, and the subject receives his earnest and careful consideration. He studies the present state of his farm and its facilities for improvement, with an eye to making the most of it as a home, and as a source of income and support. He looks to its adaptation to different products, and to the best means of fitting his soil for large returns from those suited to its capacity; not in the twilight of tradition alone, but in the sunshine of modern agricultural literature—an aid to which he gratefully acknowledges his obligations. Every farmer should study thus—should earnestly seek to make the best of the means and opportunities he possesses.

The symmetry of a farm, and the system with which it is carried on, depends to a considerable extent upon its subdivision into fields, and the character of its fences. A well considered plan here, "lies at the very foundation of convenience, system and economy." Upon the general subject of laying out farms, we can do no better than to reprint here, from The Cultivator of 1852, some general rules, closing an article by J. J. Thomas, who has further illustrated it in the Annual Register for 1859, to which we refer the interested reader.

"1. The farm-road or lane should be as short as possible in connecting the fields with the buildings. If *much used*, the *form* of the fields, if needed, should be made to conform to this requisite, and to its levelness.

"2. The barn and other farm buildings should be as near as practicable to the center of the arable land, for economy and expedition in the cartage of manure and crops; at the same time that access to the public road should not be forgotten.

"3. The number of fields should be accommodated to the system of rotation established on the farm, and should therefore be as nearly as may be of equal size.

"4. The fields should be made nearly square, for economy of fencing material, and to save occupancy of land by boundaries, less being needed for a square than any other rectangular form.

"5. When the land varies greatly in character, as in wetness or dryness, &c., such as is most similar should be brought within the same boundary, to be subjected to the same treatment in rotation. Dissimilar fields may however often be rendered alike by draining and subsoiling, when not otherwise easily subjected to a regular system.

"6. Bringing streams of water alongside the fences, affording facilities for irrigation, and also supplying water to each field for stock, should not be overlooked.

"7. Hills should be brought near the center of fields, to enable the plow to pass around them, to throw the earth downward from the mould-board.

"8. The area of each field should be determined, to enable the farmer to judge of the requisite quantity of seed and manure, and to measure the amount of crops, etc., etc."

The particular question which we would now discuss, is, what shall determine the size and number of our fields, or in other words, what "system of rotation shall we establish on the farm." If we unite grazing with grain-growing, which we must do to keep our farms fertile, we must have a considerable part of the farm devoted to pasturage, and shall need a greater number of fields than for either branch of farming taken alone. On a grain farm, with a four course or crop system, five or six fields will suffice, though other means of enriching the soil, aside from the barn manures of the farm, must be depended upon. We would propose, then, that *the amount of manure* which the farm can furnish, determine the size of the fields.

We will suppose that a farm is now without systematic division into fields—that the fences follow the lines of the old clearings, and that the soil, though naturally good, has been pretty closely worked, and is not equal to the production of good crops. The owner, with only the usual means at command, wishes to "turn over a new leaf"—to improve the symmetry, fertility, and profit of his farm, and to do it gradually, as his capital and force will allow. We could suggest no better plan than the following.

The division of the farm into fields of an extent appropriate to the manure made in any year, should be accomplished. This may be done gradually; but the fields as taken, should be put into good condition, finishing up the work as far as may be, within the year. Fence each field well, clear it of stones and stumps, underdrain it if needed, then manure it heavily, get it in good order, and plant it to corn and potatoes. These carefully cultivated, will leave the land in good condition for a grain crop, perhaps two of them, and then seeding to clover; and this course followed from field to field, with good management of every crop, will in a few years put a new face on any of "our common run" of farms.

We propose this criterion of the size of fields, because it is a mistaken though common policy to attempt the working of more land than we can fully fertilize and thoroughly cultivate. As we have urged before, in speaking on this point, (Co. Gent., Aug. 26, 1858,) the evil of "fields too large for the manure" brings many losses in its train. It is this which has led to the decreasing average product of so many of our staple crops, so much harped upon by statisticians. We have exhausted the original fertility of the soil—we must supply it by a different system of management. There is no decreased average under the better system of farming—the soil is as good as ever if fed and tilled as it should be, and in most products the yield has been increased beyond its old amount. The labor once given to clearing off forests and bringing new land into cultivation, must now be applied in giving old land better culture—to applying to use the fertilizers within our reach—to securing large crops by increased attention to the conditions necessary to their production as developed by a careful study of their characteristics in growth and purpose.

The corn crop has been particularised as a first crop for several reasons. It should have a place in every rotation where the soil will admit, and it is well suited to take precedence in any plan of improvement, as it can scarcely be injured by any amount of manure, fresh or fermented, which can be applied. It can receive that thorough and frequent culture necessary to clear the land of weeds, and it is a crop having no deleterious influence on those succeeding it in the course. From fields so treated, fifty bushels of shelled corn is not an uncommon crop; this is followed by a heavy crop of barley or oats, and then with a light dressing of manure, a good yield of wheat has been had, and this was succeeded by a grass crop, giving under proper treatment, three or four heavy annual crops of hay or pasture, when the ground was again brought under the plow.

The length to which our present remarks have extended, induce us to close without presenting all the considerations which occur to us upon the subject. We may recur to it again, but shall next refer to drainage and manure as bearing important parts in the work of Farm Improvement.

LARGE OR SMALL FARMS.

The first step toward a reformation of the rude and unsatisfactory condition of farming in this country, is for farmers to sell half their land, and to expend all their capital, labor and manure on the other half. This grand remedy is proclaimed everywhere, and become almost stereotyped in the agricultural columns of the periodical press.

But are there not two or three fatal errors in this scheme of reformation? First—To whom shall the owners of large farms sell half their land? There are now more farms in our country, than there are men who are capable and willing to manage them. There is nobody to sell to. We have the land, and we have only so-many to work it. Those in the professions, in the trades, or in commerce, would but very few of them be induced to turn to the labor of the field. And would there be any gain if the land should be divided among the laboring men? Are not two hundred acres of land better managed, and more economically, by the same force in a single farm, than if divided into four farms? It seems to be assumed that a small farm must be better managed than a large, which is not true according to our observation. Every where in the country, large farms are in as good condition, if not better than small ones.

Again—we are told that if the manure should be applied to a smaller area, the crops of fifty acres would be equal to the present crops of a hundred acres, making a vast saving of capital, taxes, fencing, labor, &c. We might ask how fifty acres can be manured from its own resources better than a hundred acres from its own resources, for it will be granted that the principal source of fertility must be found upon the farm itself. I suppose no zealous advocate of high culture would propose that the manure of the whole farm should be given to one-fourth of it, and the other three-fourths be abandoned to inevitable barrenness.

I do not deny that our style of farming is very far inferior to what it should be, and to what it will be. But I do not look to a subdivision of land as the sure means of hastening an improved system. I think the present tendency is the other way; small farms are being united with larger ones. This is growing out of the fact that land is managed with more economy in pretty good sized farms, and at a better advantage in many respects—requiring less proportional outlay for team and implements—admitting a greater variety of stock and grain in a mixed husbandry, which is best.

I do not apprehend any danger of an overgrown landed monopoly, which is contrary to the genius of our institutions. It is a happy thing for our country, that the whole system of rural labor in this country is against the creation or perpetuity of large landed estates. The noble business of farming cannot be monopolized, like manufacturing, by associated capital, but will ever be free and independent.

There are reasons enough that our agriculture has been in such a low condition. We are comparatively a new people; every thing has been hurried, and unsettled, and superficial. Now the times demand skill, thoroughness, and a wiser expenditure of labor. Labor is limited; we cannot increase it at will, and it is high; but no matter, well directed, it will pay. But it must have room—and there is room. Young men need not go into other professions; neither should they be shut up in a narrow patch insufficient to call out their talents, and afford them a handsome income. Some who have not sufficient capital of their own, may unite, for a time, in a farm of respectable size, especially members of the same family. "Two heads are better than one," sometimes. In other business, the heads and the purses are united pleasantly and profitably. It is better to keep the old homestead intact, under the wise counsels of the father and the activity of the sons, till there be means sufficient for one and another to go forth to an estate of his own. This we sometimes see realized in the happiest manner. The cares and labors of the farm are divided, the discouragements of debt are avoided, and the pleasures of this delightful occupation increased. N. Reed. *Amenia Union, N. Y.*

SHEEP RACK.

Messrs. Editors—Herewith I send you a design for a sheep rack, in a form used by me during the last eighteen or more years. It may not be too late in the season to be of use to those, who, like myself, are sometimes rather "behind time" in doing those little jobs which were as well (or better) done somewhat earlier, *if convenient*. I have just finished the repairs to an old one, and am now engaged in making several new ones of some eight feet in length, requiring some 24 rounds.

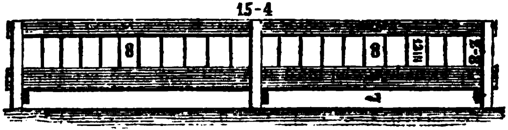

Fig. 1.

For a rack of the dimensions above given, take two boards 5 inches wide, 1¼ in. thickness, and 15¼ feet long —two do. of the same length and thickness, 7 in. wide— two do. 5 in. wide, 2.8 ft. long—two do. 7 in., 2.2 ft. in length—for the sides and ends, and three pieces 5 in. wide, 2 ft. long, to lay the bottom boards on—(or 8 in. wide, for the ends of the trough if grain is to be fed.) Also six posts, 2.8 ft. long, of oak, or other lasting timber, 2 by 4 inches.

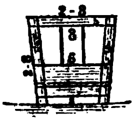

Fig. 2.

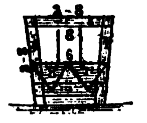

Fig. 3.

Into the lower edges of the 5 in. top boards, and the upper edges of the 7 in. lower sideboards, bore three-quarter inch holes, 2 or 2½ inches deep, 8 in. from center to center, and 8 in. from the end (and side) studs—also about 7 in. from center to center, in the end top boards; in the lower end boards the holes will be about 6 in. from center to center. Of good tough wood, (white oak, or if to be had, "*swamp oak*" is best,) 18 inches long, make 44 "rounds," split and shaved so as to be about one inch in diameter in the middle, and three-quarters, some 2½ in. at each end—(paint the ends when used.) Nail the 5 in. top boards of the sides to the outsides of the tops of the two inch sides or edges of the studs, letting the side boards extend an inch and a half beyond the studs, and drive in the rounds. Put the lower boards on the ends of the rounds, and drive them to within some 13 inches of the top boards. Make the ends in the same manner, excepting the *slope of the studs*, which should be about 4 in. on each side; the width at top being about 2.8 ft., and the bottom 2 ft. or less, as wished. Nail the three 5 in. supports for the bottom (on the *inside of the end posts*,) to the posts, so that the tops of them will be *the thickness of the bottom boards* from the *lower edge* of the end boards. Put in the bottom boards with the ends extending to the outer side of the lower end boards, and it is ready for use. See figs. 1 and 2.

If grain is to be fed, the bottom may be made of *two* troughs, with boards about 8 inches wide, put edge to edge, in triangular form, with 8 in. supports, cut to fit and nailed to the studs, (instead of the 5 in. supports.) See fig. 3.

A rack thus made, is light, easily moved about, and strong enough to last *twenty years*, if properly housed when not in use. The rounds, though small, are light and smooth, not tearing off the wool like the clumsy and rough strips of boards generally used. And I think I made mine with less labor and materials, than I could have done in any other manner which I have seen described or used—not even excepting the celebrated "Geo. Geddes' Rack."

Seneca County, N. Y. J. H. H.

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Selling Apples in the Spring.—I have neglected to report in regard to my fruit cellar of late. My last year's stock was consigned to the New-York market about the first of May, and sold most readily at $7 to $8 per barrel. I have about 150 barrels "of the same sort left." I W.

THE INFLUENCE OF EXAMPLE.

There has been no period in the history of Agriculture without its examples of productive and profitable farming, but probably at no previous time has there been found on the acres tilled by American Industry, so many bright spots to gladden the hearts and encourage the hands of the friends of improvement. The time has been when nearly every farm under cultivation for fifteen or twenty years, seemed rapidly deteriorating in fertility and in product, but at present many old farms give better returns than ever before. In buildings, implements, and farm stock, there has also been large advancement in appearance, effectiveness and value. This has been accomplished by the introduction of radical reforms in theory and practice, and extended by the influence and light of example.

Our meaning may be explained further by an instance in amplification. When an intelligent and thorough-going practical farmer buys in a neighborhood of well-worn farms, and engages in the work of reclaiming and improving his new purchase, his movements are sure to awaken a spirit of inquiry, and his example and success can but exert an influence upon many of those who witness it. He does not grow crop after crop of the same grain upon a field until it will produce it no longer, but secures good crops of different grains and products upon the several fields of his farm by a carefully adapted rotation. He introduces new and improved varieties of grains and fruits, the products of which are seen at a glance to be greater and of better quality than those commonly grown, and of better demand and price in market. The same is true of his domestic animals. His example goes to show that care in selection, in breeding, and in feeding, is well repaid—that at a small expense, a good return is ensured without fail. With improved implements of tillage, he accomplishes a deeper and more thorough cultivation of the soil, resulting in better crops, and insuring these against the effects of seasons of drouth or excessive moisture. His war against weeds is unceasing, and it soon tells in the appearance and productiveness of his farm. Clean culture is the rule with all hoed crops, and clean seed and clean summer fallows and fence corners, soon give him a farm exempt from the heavy tax upon its fertility, which is paid in the production of useless and injurious vegetation. He gives great attention to making, saving, and applying manures—seeking in every way to enrich his farm; a course that tells at once upon the products thereof, putting a new and attractive face upon all things. He affords them an example of the effect of underdraining in the radical improvement of the soil—an improvement so wonderful that it must be seen to be believed—and (to instance nothing more in this connection,) harvests his crops, and forwards all the farm-work admitting of their employment, by using the best labor-saving implements of this inventive age.

These improvements, as we remarked before, exert an influence upon the farmers who may see or hear of them. They may doubt and cavil for a while, but the unmistakable signs of prosperity to be seen upon the farm and with the farmer—showing his course to be highly profitable—will generally influence the most incredulous, if they possess any degree of enterprise, into some sort of an imitation. These slight beginnings are almost invariably followed by better returns, and by extended and more thorough improvements, and thus the work goes on until the whole neighborhood feels the influence of the advent of one progressive farmer among them—whose only teaching may have been that of silently exemplifying in his own practice an improved method of agriculture. In this way, and by the constantly recurring lessons which experience teaches, a better system of cultivation has been in part introduced, and thus also diffused and extended.

The influence of such examples are not confined to those who see them—those who hear or read of them are also influenced. These form the larger portion of the farming community, and here the agricultural newspaper gives its powerful aid to progress. It brings home the practice of the best farmers to thousands of interested readers, and they can but gain hints and suggestions of much value if applied in their own operations. The improvements of one part of the country are diffused over the whole country, and benefit all regions where their application is practicable. Those who contribute to the interest and value of our rural journals are doing a good work—the influence of their example may thus shine into every part, and hasten the progress, and increase the prosperity of our wide-spread country.

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INDIAN CORN.

Indian corn is one of the leading crops of our country, and in a pecuniary point of view takes precedence over any other of our cereals. Occupying as it does, a wide range of territory, and adapted as it is, to great differences of climate and length of season, it necessarily exhibits an almost endless variety. Some of the hard flinty sorts, are grown almost to the northern limits of our country; consequently the plant there, is dwarfed in its growth, and the grain matures early. Every degree or two of latitude south from this northern limit, exhibits an enlarged growth of foliage, stalk, ear, cob and grain. The farther south we go, the longer the season required for maturing the crop. Corn raised in New-Hampshire, and planted in Maryland, will ripen many weeks in advance of the varieties usually grown there. While the corn raised there, will not mature in the first named State.

The past season (1859) was comparatively cold, and unusually frosty; therefore was unfavorable for the corn crop overn large portions of New-England, and other of the Northern States, while in the Middle, the South, and Southwestern States, (with some trifling exceptions,) the corn crop is said to be unusually large.

In the New-England States, the corn crop in 1816 was nearly a failure, in consequence of the low temperature of that season. In 1836, in consequence of a cold summer, a very large part of the corn failed to ripen in the Northern States. In many sections of these States, the past season much of the corn failed to mature, but it averaged much better than the crop of 1836.

In portions of New-England the past year, much of the corn planted on the intervale, and other low-lying land, suffered greatly by the frosts of early June, and again by those of the middle of September. But on more elevated lands, with good culture and early maturing varieties, the corn was generally sound, and the yield was nearly an average with that of preceding years.

The above shows the importance of a proper selection of soil, abundant manuring, and a thorough preparation of the land before planting the seed. Especial attention will be required this year in selecting the *seed corn*. In 1857 the farmers in some of the western States suffered immense losses by planting seed that failed to germinate. The past season, millions were lost by planting late ripening varieties.

We may not again be visited with such an untoward season for years to come; yet, as no one can accurately predict the temperature of the coming summer, it will be wisdom in us to be prepared for the worst. The loss of a corn crop to the farmer is usually a serious one, yet this loss can frequently be guarded against by a change of seed. In making a change of seed corn it is the safest way for the farmer to procure seed north of his location. The farther north, the earlier it will mature, and, as a general rule, the smaller the growth. But then, ten bushels of ears of well ripened Canada corn is worth more for "man or beast" than twice that amount of large frost-bitten, soft ears. We pen these suggestions for the benefit of our readers in those sections of our country where the corn failed to properly mature the past season. There will be ample time between this and planting season, for farmers to procure seed grown far north of them, if they so choose. But if they do not see the necessity of it, we would suggest to them the importance of soon selecting from that of their own raising, and carefully ascertain whether it will all or only a part of it vegetate; and then have the requisite supply of seed ready for use whenever the temperature of the season and soil will justify the committal of the seed to the bosom of mother earth.

Some farmers are always in a great hurry to get their corn planted "extra early," and they sometimes "miss it" by so doing. In the *North American Review* for October is an article, from which we make the following extract, having a direct bearing upon this point—it says:

> "No plant can germinate without a certain degree of *heat*. Each plant, however, has its own peculiar range of temperature. Wheat will not germinate when the soil is below forty-five degrees Farenheit, or above ninety-five degrees. Corn requires ten degrees more heat than wheat. Should it be planted, therefore, when the soil does not indicate fifty-five degrees at least, its starchy portions, if the weather continue wet and cold for a week or two, will be decomposed and diffused, wholly, or in part, through the soil, so that when the warmth becomes sufficient to quicken the germ into activity, the plumule, failing to find the proper nourishment at its root, does not appear at all, or comes up a puny starvling, and after living a few weeks 'at a poor, dying rate,' expires like the wretched cardinal, and "makes no sign."

This principle is universal in its application to the germinating processes of the vegetable kingdom. The man therefore who puts his seed into the ground without any reference to its temperature, is liable both to lose his time and "beg in harvest."

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SPRING PIGS FOR MAKING PORK.

That pork may be made most profitably of spring pigs, kept growing as rapidly as consistent with health until fall or early winter, has been shown by many successful experiments. Yet nothing is more common among farmers than to winter over pigs, weighing in the fall about one hundred pounds, expecting to make hogs when fattened a year later, weighing in the neighborhood of three hundred and fifty pounds. A year's care and keeping is given to very small advantage over pigs properly fed for less than half the time.

March pigs of a good breed, well kept and learned to eat while with the sow, then taken away at two months old and fed all they will profitably consume, will make "three hundred hogs," by the last of November. There have been frequent instances of a gain of one and a quarter lbs. a day, and even more. "Pigs, recently from the mother," says a writer on this topic, "may safely and profitably be fed frequently. The digestive powers are most active in the *young* animal, as a matter of theory even; in practice it is found emphatically so; and if the animal is fed always, the growth is never stunted, and the animal does about all it was made to do, in a short time." An instance is given where two pigs fed from two months old, three, and often four times a day, with Indian meal and skim milk, weighed when slaughtered, at seven months old, three hundred and fifteen pounds.

An example of the cost and results of fattening shoats by feeding through the summer, met our eye sometime since, in the N. E. Farmer. A pig was bought of a drover, weighing at the time 120 pounds, and costing $10.20. He was kept nearly nine months, consuming meanwhile, besides slops from the house, $25 worth mostly of corn-meal, and his dressed weight was 353 pounds. Taking first cost and expense of food purchased only into account, the pork cost ten cents per pound, though the cost of the meal would not average above $1.00 per bushel. The time spent in feeding, and the value of the slops, may have been remunerated by the manure, but we think manure could be made less expensively by fattening spring pigs; at least less time would be required in the process.

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SUCKERS IN APPLE ORCHARDS.

Eds. Co. Gent.—Can you or some of your contributors, give me an effectual remedy for what I suppose is a disease among my apple trees, to wit, the sending up of hundreds of sprouts from and around the roots of the trees? Where I have cut them off two or three times during the past year, it seems only to increase their number five-fold.

Lexington, Mo. J. C.

The remark is often made, that the suckers of apple trees, made use of as stocks to graft in, are apt to produce suckers. This is true only so far as those particular trees which sucker most abundantly are apt to be selected from which to obtain the supply, and of course the new stocks have the same peculiarity. Suckers should never be used for stocks; but if they are, they should be taken from trees producing the fewest.

To clear suckers from orchard trees, they should not be *cut* off, for new shoots will spring from every stub left. The right way is to keep the ground smooth, mellow, and clean; and then about the middle season of growth, or during the first half of summer, put on thick cowhide boots, and stout buckskin mittens; seize one sucker at a time, placing the boot upon it close to the tree, give a sudden jerk with the hands, and it will be torn out root and branch, leaving no stump. An occasional repetition of this process will keep the orchard clear. Suckers always give a slovenly appearance to an orchard, and should not be suffered to grow. They also favor the depredations of the borer.

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Receipt for Crullers.

Two teacups sugar—two teacups sweet milk—two large tablespoonfuls of butter—two eggs—two large teaspoonfuls of soda—four do. of cream tartar—a teaspoonful of essence lemon. L. S. G.

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I feel indebted to The Cultivator, for many valuable suggestions and recipes, and in return I should like to give a simple one that has never failed:—

To Cure a Cow of a Caked Bag.—Half bushel of carrots a day for two or three days, and *milk clean*.

E. H. Mulford.

NEW-YORK STATE AG. SOCIETY.

The annual meeting of this Society was held in this city on the 8th and 9th of February. It met in the Assembly Chamber at 12 o'clock on the 8th—Hon. A. B. Conger, President, in the Chair—B. P. Johnson, Sec'y.

The Treasurer, L. H. Tucker, read his annual report, of which we present the following brief abstract:

RECEIPTS OF THE YEAR.

Cash on hand from last account,	$ 2,650.93
Life Memberships during the year,	657.00
Other Memberships do.	75.00
Use of Tent, 1858,	16.00
State Appropriation for Dr. Fitch,	1,000.00
From Local Committee for Albany Fair Expenses,	1,200.00
Receipts of Albany Fair,	18,111.33
State Appropriation,	700.00
Total,	$24,410.26

EXPENDITURES OF THE YEAR.

Premiums at Winter Meeting,	$ 691.00	
Expenses do.	70.56	
Salaries and Travelling Expenses, (including Dr. Asa Fitch,)	8,779.71	
Library and Museum Expenses,	181.10	
Premiums, &c., on account of Previous Fairs,	547.14	
Postage Account,	156.93	
Incidental Expenses,	175.81	
Printing, Advertising and Stationery,	837.90	
Expenses of Albany Fair,	5,969.84	
Premiums, &c., Albany Fair,	6,115.20	
Survey of Onondaga County,	200.00	
Total,	$18,734.19	
Cash on hand,	5,686.07	
		$24,410.26

⁂ The balance on hand, however, is subject to a still unadjusted claim on the part of the Albany Local Committee.

The customary Annual Report from the Executive Committee was read by the Corresponding Secretary, Col. B. P. Johnson. After mentioning that the past year has been one of unusual Agricultural interest, not only from the success of the State, County, and Town Agricultural Fairs that have taken place, but also as in some respects quite a peculiar season—attention was directed to the encouraging remarks contained in the Governor's Message, also to the commendation he expressed of the Agricultural College at Ovid. The survey of Onondaga Co., just completed by Hon. Geo. Geddes was highly spoken of. The fact was mentioned that the wheat crop of the past year was an unusually good one, showing how important it is to its rescue from the ravages of the midge, that it should be brought forward as early in the season as possible. The importance of Agricultural Statistics was next referred to; the extent of our dairy interests considered; an allusion given to the use of steam power in farming; an early catalogue of the Agricultural Museum partially promised, (which would be a most convenient and valuable matter for every visitor.) The circulation of our Transactions in exchange for those of other bodies, has shown that they are held in high esteem, and has been the means of spreading the knowledge of our implements more widely; and the hope was expressed, to which we may here call particular attention, that our citizens would prepare themselves to be well represented at the World's Fair promised in London in 1862. The subjects next treated were the value of Dr. Fitch's investigations; the system of visiting the farms entered for the Society's Premiums; and, lastly the general character of the last Exhibition in this city. We were very glad to notice, in addition to the above, that the Report contained some very just observations upon what is really a great desideratum whenever the Society is able to accomplish it, either through its own resources or with the assistance of the State, viz: the employment of an accomplished chemist to pursue his investigations under its directions, as those of Dr. Fitch are now carried on in Entomology; and a complimentary, but well deserved allusion was made in passing to the services performed for the Agriculture of Connecticut by Prof. S. W. Johnson, under the auspices of the Society of that State.

With the Report of the Executive Committee, there was embodied the report and resolutions offered by Messrs. Kelly, Peters, Johnson, Wainwright and Cheever, the committee to whom was referred the duty of presenting officially an announcement of the death, during December last, of three valued members and late officers of the Society. This was read by Mr. Bogart, at the request of the Chair, and conveys a just and graceful tribute to their memory, which will appear in the next volume of the Transactions, and we make room below for the resolutions appended and previously passed by the Board:

Resolved—That in the death of Benjamin B. Kirtland, Joel Turrill and Anthony Van Bergen, the New-York State Agricultural Society has sustained the loss of three of its oldest associates and warmest friends—the cause of agriculture, three of its most devoted and intelligent diciples, and the christian community some of its most exemplary and respected members.

While as individuals we mourn the departure of those who have been endeared to us by long companionship, and whose intercourse with us has been marked throughout by kind feeling, by christian courtesy, and by cordial sympathy in all the objects which as farmers we have had at heart; as a Board, we deplore the loss of those whose valued labors have been associated with every important enterprise of this Society, and whose example as liberal minded, intelligent farmers was so well calculated to inspire all engaged in that pursuit with higher aspirations, and with greater love for their calling.

Resolved—That this Report and the accompanying resolutions be entered at length on the minutes of this Board, and be printed in the Transactions of the Society.

Resolved—That a copy of this report and resolutions be sent by the Secretary under the seal of this Society to the family of each of the deceased, with the assurance of the sincere sympathy which the members of this Board severally feel for them in their affliction.

On motion of Gov. King, the report and resolutions were adopted.

A letter was read from citizens of Elmira, applying in behalf of that place as the location of the next Show, and offering to meet in all respects the Society's usual requirements. The committee of twenty-four then withdrew for consultation, and after a brief and harmonious session, returned with a report reccommending Elmira as the location of this year's Fair, and proposing for election the following officers, who were duly balloted for and unanimously chosen.

President—BENJ. F. HUNTINGTON, Oneida county.

VICE-PRESIDENTS.

First District—John Jay of Westchester county.
Second—Charles S. Wainwright of Duchess.
Third—Herman Wendell of Albany.
Fourth—Calvin J. Hulburd of St. Lawrence.
Fifth—John Butterfield of Oneida.
Sixth—Francis M. Rotch of Otsego.
Seventh—James O. Sheldon of Ontario.
Eighth—T. C. Peters of Genesee.
Cor. Secretary—B. P. Johnson of Albany.
Rec. Secretary—Erastus Corning, Jr., Albany.
Treasurer—Luther H. Tucker of Albany.

Executive Committee—Hon. A. B. Dickinson of Steuben; L. Chandler Ball of Rensselaer; Chas. P. Wood of Cayuga; Ezra Cornell of Tompkins; and Samuel T. Thorne of Duchess.

Manures for Grass Lands.

The Wednesday evening meeting of the Society, held in the Assembly Chamber, was attended by a very large audience, among whom, as well as in the morning, were to be recognized many of the oldest and best known members of the Society, and several of the most accomplished agriculturists of the state. After the President, Mr. Conger, had taken his seat, a paper was read upon the use of Manures in the Fertilization of Grass Lands, by Mr. J. Stanton Gould of Columbia.

Dr. Asa Fitch followed with an interesting paper on the Curculio and Black Knot, a brief summary of which we reserve for our Horticultural Department another week. He was followed by the passage of a resolution, on motion of Hon. T. C. Peters, requesting the Legislature to continue their customary appropriation in behalf the important investigations Dr. Fitch has been several years engaged in carrying on, under the auspices of the Society.

The Exhibition at the Society's Rooms.

The Show on the 9th was a good one, and the quality of the articles said to be unusually fine. There were 147 plates of winter fruit, 46 of which were winter pears chiefly from the grounds of Ellwanger & Barry, in excellent condition and very attractive in appearance.

The apples included very large specimens of the Fameuse and the King of Pippins, while the King of Tompkins, Swaar, Lyman's Pumpkin Sweet, and Twenty-Ounce, were fine.

A large quantity of Grain was on exhibition, and of a very good quality, full and heavy. A large dressed Hog, at the head of the hall, was shown by William Richardson, weighing 529 lbs., of the Yorkshire breed. A fine carcase of mutton weighing 126 lbs., was exhibited by Messrs. Charles & Van Meter of Center Market. There were forty-three firkins of Butter and twelve boxes of Cheese. The display of dressed poultry was not large. There were thirty-five plates of Potatoes. A Churn was brought forward by T. A. Jebb of Buffalo, the Patentee, called the "Telegraph Churn," which was highly recommended, and attracted much attention from the favorable results of several trials made at the rooms during the day.

The following are the awards of the several committees whose reports were submitted during the day:

FARMS, &c.

Grain—First premium, Lewis Sherrill, Greenville, Greene Co.	$50
Dairy—First premium, Hiram Mills, Martinsburg, Lewis Co.	50
Draining—Best experiment, W. T. & E. Smith, Geneva, (83 acres,)	20
T. C. Maxwell & Bro., Geneva, special, (30 acres,)	S. Medal.
Fertilizers for Indian Corn, W. P. Ottley, Phelps, Ontario Co.	$50
Irrigation of Land, C. S. Kiersted, Kingston, Ulster Co.	20
Prepared Grasses and Herbage, Mrs. J. T. Van Namee, Pittstown, Rensselaer Co., (97 varieties,)	15
Grain and Seeds—Mrs. Henry Wier, Johnsonville, Rens. Co., 35 varieties Grain and Seed bottled and 17 do. stalk,	10

FIELD CROPS.

Best crop of Spring Wheat, C. W. Eells, Westmoreland, 68 48-60 bush., two acres,	$15
Best crop Spring Barley, Hiram Mills, Martinsburgh, 123 9-48 bush., two acres,	15
Best crop Rye, C. L. Kiersted, Kingston, 302 bushels, 8 35-100 acres,	15
Best crop Oats, C. L. Kiersted, Kingston, 213 bushels, on two acres,	15
2d best crop of Oats, W. H. Slingerland, Albany Co., 618½ bushels by measure and 657¾ by weight, 6¼ acres,	10
Best crop Buckwheat, C. L. Kiersted, Kingston, 35½ bush., one acre,	8
Best Crop Peas—E. W. Bushnell, Hillsdale, 40½ bush., 1¼ acres,	$8
2d do., John Potter, Marcy,	5
3d do., Ira R. Peck, East Bloomfield,	Trans.
Potatoes—Best crop, E. S. Hayward, Rochester, 305 bush., 1 acre,	$8
Ruta Bagas—Best crop, Hiram Olmstead, Walton, 807 bush., 82 rods,	8
Carrots—Best crop, E. S. Hayward, Rochester, 47-100 acre, 303 bush.,	8
2d do., Hiram Olmstead, Walton, 42 rods, 277 bush.,	5
3d do., A. Gurnee, Watertown, 1-5th acre, 195 bush.,	Trans.
Discretionary—Best crop Grass, C. L. Kiersted, Kingston,	Trans.
Flax—Best crop, M. C. Snyder, Rensselaer Co.,	$15
2d do., Henry Wier, Rensselaer Co.,	10

GRAINS AND SEEDS.

Winter Wheat—Oliver J. Tillson, New Paltz, 60 lbs.,	$3
Spring Wheat—Best, C. W. Eells, Westmoreland, 63 lbs.,	3
2d do., W. P. Coonradt, Brunswick, Rens. Co., 62 lbs.,	2
3d do., A. E. Van Allen, East Greenbush, 62 lbs.,	1
Rye—Best, O. J. Tillson, New Paltz, 59 lbs.,	3
2d do., E. W. Bushnell, Hillsdale, 58 lbs.	2
3d do., W. P. Coonradt, Brunswick, 56 lbs.	1
Barley, 2-rowed—Best, H. Mills, Martinsburgh, 50 lbs.,	3
2d do., Norman Gowdy, Lowville, 49 lbs.,	2
Oats—Best, C. W. Eells, Westmoreland, 42 lbs.,	3
2d do., George Cary, Bethlehem, 42 lbs.,	2
3d do., Henry Wier, Johnsville, 40 lbs.,	1
Corn, yellow—Best, E. S. Elting, New Paltz, 61 lbs.,	3
2d do., Wm. Newcomb, Rensselaer Co., 60 lbs.,	2
3d do., W. P. Coonradt, Rensselaer Co., 61 lbs.,	1
Corn, White—Best, Henry Wier, Rens. Co., 58 lbs.,	3
Peas—Best, Henry Smith, Lowville, 63 lbs.,	3
2d do., Norman Gowdy, Lowville, 61 lbs.,	2
3d do., E. W. Bushnell, Hillsdale, Col. Co., 62 lbs.,	1
Beans, white—Best, W. P. Coonradt, Rens. Co., 64 lbs.,	3
2d do., O. Howland, Auburn, 63 lbs.,	2
3d do., Henry Wier, Rensselaer Co., 61 lbs.,	1
Flax Seed—Best, Henry Wier, (red flax,) 53 lbs.,	3
2d do., Henry Wier, (white,) 52 lbs.,	2
3d do., Wm. Newcomb, Rensselaer Co., (red,) 50 lbs.,	1
Buckwheat—Best, O. J. Tillson, New Paltz, 52 lbs.,	3
2d do., Wm. P. Coonradt, 52 lbs.,	2
3d do., A. E. Van Allen, East Greenbush, 51 lbs.,	1

DISCRETIONARY.

Corn in the ear, D. W. C. DeForest, Rensselaer Co.,	Trans.
do. W. P. Ottley, Ontario Co.,	Trans.
E. S. Elting, New Paltz, Rhode Island Corn in ear,	S. S. M.
W. P. Coonradt, Brunswick Sweet Corn,	Trans.
Samuel Cheever, Waterford, 26 varieties of Potatoes, raised from seed furnished by C. E. Goodrich, Utica, the fifth year from planting, special premium recommended.	
B. N. Huntington, Rome, exhibited nine varieties of Potatoes,	Trans.
W. P. Ottley, Phelps, some fine specimens of Chilian Potatoes,	Trans.
D. A. Buckley, Williamstown, Mass., five samples of early and late Potatoes,	Trans.
Wm. A. Gurnee, Watertown, Carrots,	Trans.

BUTTER.

Best 3 tubs, Elisha Crofoot, Turin, Lewis Co.,	$15
2d do., Hiram Mills, Martinsburgh, Lewis Co	10
3d do., F. B. Rugg, Leyden, Lewis Co.,	5
4th do., Mrs. P. Lathy, Phelps, Ontario Co.,	Trans.

Best three tubs made in June, August and November.

Best, F. B. Rugg, Leyden, Lewis Co.,	$15
2d do., Elisha Crofoot, Turin, Lewis Co.,	10
3d do., L. L. French, Warren, Herkimer Co.,	Trans.

Winter Butter.

Best sample, R. H. Wands, College Farm, Ovid, Seneca Co.,	$5
2d do., Sanford Coe, Constableville, Lewis Co.,	3
3d do., N. Gowdy, Lowville, Lewis Co.,	Trans.

DISCRETIONARY.

Mrs. Harilla Winchell, Morehouse, for the best specimen of Butter, from Hamilton Co.,	Trans. and Fruit Book.
Miss Jane E. Mills, Martinsburgh, Lewis Co., handsome specimen Butter,	

CHEESE.

Best 3 Cheese, Norman Gowdy, Lowville, Lewis Co.,	$15
2d do., E. F. Carter, Le Ray, Jefferson Co.,	10
3d do., Hiram Mills, Martinsburgh, Lewis Co.,	5
4th do., Theron Van Auken, Phelps, Ontario Co.,	Trans.

DISCRETIONARY.

R. H. Wands, New-York Ag. College Farm, Ovid,	$5

FRUIT.

Pears—Best Collection, Ellwanger & Barry, Rochester,	Dip. & Medal.
2d do., E. Dorr, Albany,	Medal.
Apples—Best 20 varieties, Ellwanger & Barry,	Dip. and $4
2d do., W. H. Slingerland, Albany,	Dip. and 3
3d do., W. P. Ottley, Phelps,	copy of Barry.
Best dish, H. C. DeForest, Rensselaer Co.,	Medal.
2d do., Cornelius Chase, Columbia Co.,	vol. of Trans.
Grapes—Best Isabella and Catawba, R. P. Wiles, Albany,	vol. Thomas.
Thomas Evans, Watkins, Fruit Picker,	S. S. M.

WINES.

Best Isabella, Dr. O. F. Presberry, Buffalo,	copy of Downing.
Currant, Ellwanger & Barry, Rochester,	do.
Elderberry, A. F. Chatfield, Albany,	do.
Pure Cider, O. Howland, Auburn,	copy of Thomas.
Maple Molasses, Hiram Mills, Martinsburgh,	vol. of Trans.
Preserved Strawberries, P. Myers, Bethlehem,	Thomas.

MISCELLANEOUS.

T. A. Jebb, Buffalo, Patent Telegraph Churn, manufactured by B. D. Gilbert, Buffalo,	Dip.
Wm. Richardson, Albany, fat Hog, 529 lbs.,	S. Medal.
W. P. Ottley, Phelps, very fine Poultry,	S. S. M.
O. Howland, Auburn, Poultry,	Trans.
Walter A. Wood, Hoosick Falls, Rensselaer Co., model Wood's Patent Mower,	
S. E. & M. P. Jackson, Boonville, Oneida Co., model of Mowing Machine, with improvements on side draft,	
T. K. Van Zandt, Albany, painting of Bull "Neptune," owned by Hurst, Bullock & Slingerland,	Dip.

Informal Meeting for Discussion.

A meeting was held in the Society's Lecture Room, on Thursday, Chancellor McCoun presiding, for the purpose of informal discussion. Some notes of the proceedings, will hereafter appear in our columns.

Addresses from Presidents Conger and Huntington and Others.

In the evening, President Conger called the meeting to order at half-past seven. After the reading by Secretary Johnson of reports awarding the prizes as above given, Mr. Conger proceeded to address the Society, reviewing the history of that body and preceding organizations in this State devoted to the promotion of Agriculture; expressing some gratification at our present position; suggesting one or two precautions in the management of our future exhibitions, and intimating that the railroad companies would hereafter issue excursion tickets for them. Many other points of practical and scientific nature were briefly referred to, and, in concluding, Mr. Conger introduced to the audience his successor in office, Hon. B. N. Huntington of Oneida.

The President elect thanked the Society for the honor conferred upon him, in a few well chosen remarks. A vote of thanks was passed unanimously to the retiring President, Mr. Conger, for the able manner in which he had performed the duties of the office during the past year, and for his instructive address, a copy of which was requested for publication. Ex-Governor King then brought forward the subject of the Agricultural College, earnestly impressing upon the company his sense of its high character and importance, and calling out Major Patrick, the President of the Institution. Major P. spoke of the necessity of a higher order of agricultural education than we had hitherto received, and thought a better system of culture was called for here, since the fertility of her soils was enabling the West to under sell us in all the markets of the world.

Agriculture was of too great concern to be suffered to shift for itself in the matter of education and the preparation required for successful practice. It was impossible to calculate the influence of one good farmer upon the agriculture of his region. He said John Johnston had told him (he was sorry he was not present to speak himself,) that the value of real estate in Seneca county had increased one-tenth throughout the county, under the influence of the exertions of John Delafield. Mr. Patrick alluded to the wants of the Institution to which he had been called, and said $81,000 had been expended in its establishment, and some $20,000 more were required—he referred to the report on the subject, for information in regard to it. The institution would probably be ready for pupils about the 1st of April. Enough applications had been received during the first 20 days of the month past, to compose the first class. He urged the propriety of the farmers present bringing the subject before the people at large. Scarce any of our prosperous farmers but could aid materially by money or otherwise, in placing the institution upon a solid foundation, and he was sure when once established it would be self-sustaining.

A resolution was offered by Chancellor McCoun welcoming Major Patrick among the farmers of the state, whenever he should present before them the claims of the institution over which he presided. Some other unimportant business was transacted, and then the Society adjourned.

Cost of Draining—Thomas' Drain Plow.

Messrs. Eds.—Having last season put down a few thousand tile by the aid of Thomas' drain plow, at a cost very much less than I had ever been able to do it at before, perhaps it may be of some service to those of your readers who, like myself, are farmers of wet clays, to lay before them a short statement of the way in which the work was done, and comparative tables of the cost of sinking ditches by the spade and by the plow.

Allow me in the first place to say, that my farm belongs to the stiffest class of fine yellow clays, with no variation in the subsoil, save that the deeper you go the stiffer it becomes. The greater part of it too, lies on almost a dead level, with numerous shallow basins of a quarter or half an acre in extent, a few inches lower than the surrounding surface; while the whole seems to have been formerly plowed without any reference to the fall of the dead furrows corresponding to the lay of the land. I merely mention this, to show that there are but few farms on which drains cannot be laid as cheaply as on my own.

In the month of May last, I laid out on a piece of six acres, 493 rods of tile-drains, 25 feet apart. There was already a large stone drain 3½ feet deep, running lengthways through the piece, into which the new ones were to empty. These were all opened to a depth of about 10 inches with a common plow, by a pair of horses and two men in little over half a day. (For this labor-saving idea I am indebted to my old friend, Mr. Robt. Swan of Geneva.) With the same plow, set as deep as possible, we then threw two furrows together in the bottom of the ditch, and when this loose earth was thrown out we already had a depth of from 15 to 18 inches. With Thomas' draining plow we had then no difficulty in so loosening the earth for another 15 inches, (giving us a total depth of 33 inches or a little over,) that it was easily thrown out with a common shovel. It required three separate plowings to get it to this depth—about five inches of earth being loosened each time. One man and a pair of horses, straddling the ditch, worked it with ease; passing it through the ditch four times for each plowing, so as to get the earth thoroughly loosened. The final spit, grading the fall, was removed with a narrow draining-spade and a scoop. The tile were covered with inverted sods, and the earth, thrown out equally on both sides, was all returned with a common plow.

The past spring here was very wet, so that several days we could not use the draining plow, for fear of the horses slipping into the ditch, and were obliged to open a number of rods in the old way, with spades. It also prevented my finishing the job at that time, leaving about a quarter of it until the end of last month, when the days were very short. The land was so nearly level that it required great care and a good deal of time to grade the bottom properly; but we got most of the tile down to a depth of three feet.

Let us now compare the cost of these drains with that of a piece done a few years ago entirely by the spade and shovel, on exactly similar land.

Cost of Laying 625 rods of Tile with Spade and Shovel.

To 117½ days sinking ditches, at 87½ cts.,	$102.81
17 do. laying tile and covering with sod,	14.88
32¾ do. filling,	28.65
	$146.34

Or nearly 23½ cents a rod.

Cost of Laying 493 rods of Tile with Plow and Shovel.

To ⅔ day, horse team and extra driver, marking out, at $3.75,	$2.50
3 do. do. plowing earth loose, at $2.87½,	8.62
45 days shovelling out loosened earth, at 87½ cts.,	39.38
13 do. laying tile, and covering with sods, at 87½ cts.,	11.37
1¼ do. horse team filling, at $2.87½,	3.60
	$65.47

Or nearly 13¼ cents a rod.

I have not included the tile in either case, as the cost of them per rod would not differ. I have also charged full price for the horse labor, which should be done in all farm accounts, though in this case they would have been standing idly in the stable if they had not been used here. If we deduct the charge for team, it makes the cost 11¼ cts. a rod.

It will be thus seen, that by using the plow instead of spades, I was able to get my ditches sunk and refilled for about one-half, though working under several disadvantages. I am confident that under favorable circumstances, three feet drains can be sunk with the plow for *eight cents a rod*, while I find some of my neighbors paying the Albany contractors 25 cts. Now I feel that there is some hope of my being able to drain my land at a cost that will make it pay, as soon as opposition brings the price of tile down to anything like a reasonable sum—say one-half of what they are now asking in Albany.

I add a table to show the number of rods of drains to the acre in thorough drainage, at various widths, thinking it may be useful to some of your readers. No allowance is made for the mains, for if the lateral drains enter them from both sides, they will be entirely extra, and it will be best to consider them so in making calculations as to the cost of draining any piece of land. I also add the number of tile required to the acre, allowing 16 to a rod, which I have found to be about right; and a third column, showing the cost per acre, laid about three feet deep, taking my operations of the past summer as a basis for the labor account, and tile at $10 a thousand, the cash price of two-inch sole-tile at Albany. Of course this last column can only be considered as a general guide, even when the expense of transportation is added to the first cost of the tile; but it may be of service to some farmers who intend trying underdraining this year.

Width of interval between drains.	No. rods to the acre.	No. tile to the acre.	Cost per acre. 13¼ & 16—say 30 cts.
20 feet,	132	2,112	$39.60
25 do.	105½	1,688	31.65
30 do.	88	1,408	26.40
40 do.	66	1,056	19.80
50 do.	52¾	844	15.82½
60 do.	44	704	13.20

I doubt if any thing at intervals greater than 60 feet can be called thorough drainage, so I have not carried my calculation farther. W. C. S.

* * *

[For the Country Gentleman and Cultivator.]

SHALL WE BUY THE CATTLE WE FEED?

Eds. Co. Gent.—I thank your Geneva correspondent, John Johnston, for his prompt response to my inquiry on cattle feeding. I thank him also for the valuable instruction he has given in that important branch of farm economy. I find I was correct in my former communication, when I remarked that Mr. Johnston was a much more successful feeder than I was; but I did not expect to be so badly beaten as I now find myself to be.

Last season I sold my four-year old steers at $60, and thought I was doing pretty well. This year I have as good, but the price ruling low I could not now get as much for them. Mr. Johnston, at 22 to 24 months old, by his system, gets from $47 to $60, a gain of two years upon my system of feeding.

This comparison between Mr. Johnston and myself, reminds me of a very pointed and practical illustration of the value of Agricultural Fairs, made in an address before one of our Maryland Societies, some years ago, by Prof. Benjamin Hallowell, late President of the Maryland Agricultural College—a man of wisdom and learning, and devoted to rural life and agricultural improvement. Mr. Hallowell, on the occasion alluded to, was invited to deliver an address before the Ag. Society in the county in which he resided. Feeling, doubtless, a little ambitious from the position he was to occupy, to have something attractive from his own farm to exhibit, he went among his stock to make his selection; but he found nothing which so completely filled his beau ideal of perfection as his half-blood Merino ram. This ram was forthwith ordered to the Fair, and with the just pride of a farmer, friend Hallowell soon invited his friends to an examination of his beautiful sheep—when to his astonishment and surprise he found his favorite ram, the pride of his flock, completely and overwhelmingly eclipsed by a pair of noble Cotswolds, exhibited by Horatio Trundle, Esq., from another part of the county, the existence of which he, Mr. H., was totally ignorant of. In his address the learned Professor turned this circumstance to very good account. In speaking of the value and importance of Agricultural Fairs, he frankly confessed the pride with which he had entered his aforesaid ram for the prize, which he confidently expected to win until he saw the far superior sheep exhibited by his friend Trundle—and but for this exhibition, he not only should have remained ignorant that there was such sheep in the county as his friend Trundle had exhibited, but that he should have continued himself under the delusion with which he left home, that he had himself the finest.

Just so it is in raising and feeding cattle; but for the medium of your valuable paper, and the interesting and instructive communication of Mr. Johnston, I should have remained under the delusion that I was doing pretty well in raising and selling four year old steers at $60 per head. I now find they can be sold for as much money at 2 years old, by Mr. Johnston's superior management.

Something, however, is due to difference in circumstances. In a rapid railroad excursion to the north some years ago, I was struck with the beauty, fertility and high state of cultivation of the land bordering on Seneca lake, on which I believe the town of Geneva is situated.

I am afflicted with a larger quantity of old worn out land (as we describe it in the south) than I can at present bring under the hand of improvement. The only profitable way of using such land, is to appropriate it to pasturage for sheep and young cattle. My practice then is, to winter my calves as Mr. Johnston does—the first winter on clover hay, omitting the meal which he adds to the clover hay—and in the spring turn them on the inferior pasture just described. The second winter they are fed on corn fodder and wheat straw, without grain, and turned again with the sheep on inferior pasture. The third winter fed as the second, and the following spring put on better pasture, which by the fall brings them forward in a condition to be sold as grass fed beef, or fed 2 or 3 barrels of corn, worth from $6 to $9, and generally sold at a much higher price as stall fed beef. In this way I bring my 4 year old steers, at a cost of not over $9 in grain, to an average of $60 per head. Mr. Johnston, by feeding from $15 to $20 worth of oil meal or other grain, sells his two year old steers for $60 per head. His is doubtless nearer the true mercantile principle of turning his capital as rapidly as possible. But my objection heretofore to feeding cattle so young, was a want of maturity, and consequently a disposition to take on and carry to market solid and substantial fat and tallow. Mr. Johnston's system of feeding oil cake, with which I have no experience, will perhaps overcome this objection. He, however, admits that he finds it more profitable to buy 3 and 4 year old cattle to feed; but what then becomes of his calves? Are they sacrificed to the butcher and the epicure? It is against this wasteful and destructive practice that I contend—wasteful, because it destroys in infancy an animal fitted and intended for rapid growth, improvement and maturity—destructive, because it deprives the country of the provision intended by Providence to feed and sustain it. To buy 3 or 4 year old cattle to fatten, requires an active capital constantly on hand to keep up the supply—and renders us dependant on others for what we can ourselves furnish. My plan brings to maturity and full development the tender calf—saves the capital necessary to buy the 3 and 4 year old steers, and renders me independent of the fluctuations of the stock market. Mr. Johnston's system requires tact and judgment in *buying* as well as selling. The system I advocate is better adapted to that large class of farmers who are not so highly gifted in this respect as Mr. Johnston evidently is.

A Maryland Farmer.

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[For the Country Gentleman and Cultivator.]

To make Hard Soap.

Eds. Co. Gent.—I send you the following recipe, which I wish the readers of your paper to have the benefit of, as it is considered the best of many:

Take 6 lbs. of soda, 6 lbs. of fat, 3 lbs. of lime, and 4 gallons of water. Put the soda, lime and water in the boiler, and boil them. Then take it out in something to settle; then put the fat in the boiler and add the water (leaving the settlings behind.) Boil about half an hour, or until it is thick. Then take it out to cool, when it is ready to cut as is desired.

Highland Home, Pa. E. Cope.

[For the Country Gentleman and Cultivator.]

TREATMENT OF RINGBONE.

Messrs. Editors—In the Country Gentleman of Jan. 12, you say "there is no cure for confirmed ringbone." A few years since, one of my horses was badly ringboned upon both hind feet, and very lame. A friend, upon seeing his lameness, remarked that he could give me a recipe that would surely *cure the lameness, but not remove the bunches.* I tried it as directed, and a permanent cure of the lameness was effected within a month. I was requested *to keep it a secret*, and I will *say nothing about it*, but let the Country Gentleman" *do the talking.* Recipe:

¼ pint spirits turpentine.
1 ounce oil oreganum.
1 ounce oil amber.
1 ounce oil of spike.
¼ an ounce aqua fortis.

Mix in a bottle, and apply daily (Sundays excepted) with a swab. L. T. M. *Vernon Center, N. Y.*

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LARGE OR PEAVINE CLOVER.

We find the following article on this variety of clover, about which there has been considerable inquiry of late, in the Mohawk (Herkimer county) Courier, and it is, we presume, from the pen of the editor of the Ag. Department of that paper:

The large variety of clover, sometimes called "peavine clover," and from being extensively raised for seed in the southern part of this county, known in some parts as "Herkimer clover," has some qualities that commend it to the use of dairymen.

Firstly, its enormous growth. It yields fully double the amount of herbage produced by any other clover or grass we cultivate. It has been objected to by some as being *too large.* Its stems grow very long and large in rich soil, and not being able to support their weight, a considerable portion of them often lie flat upon the ground, and hence become more or less injured. Weight for weight, such hay is not as good as that made from timothy, red top, nor June grass; nor is it as good as from clover that has not fallen down, but still it makes valuable fodder.

I am now keeping part of my cows upon this kind of clover that grew at the rate of six loads to the acre, as large as I could draw on a common hay rigging. It was coarse indeed; but it was well cured, and comes out bright and free from mould or discoloration by heating, and without loss of leaves. The cows eat it readily and with a good relish, consuming even the coarsest stems. They keep in good health and flesh, and are in every respect doing finely upon it. The value of this, like any clover, depends very much upon the manner in which it is cured. When partly dried, its strength is quickly steeped out by a shower of rain; or its leaves lost, and its goodness burnt out by drying too long in the sun; and to be good must be cut when in full blossom.

Secondly. This kind of clover is less liable to injury by drouth than any other, and much less so than the grasses. As soon as it gets a hold in the soil, its large and long roots strike down below the reach of drouth. I have never known it to be effected by the dryest seasons we have had since I commenced cultivating it.

Thirdly. It ripens at the same time with timothy, and hence is better where timothy is to be cultivated with it. The earlier kinds will be greatly injured by standing till timothy is ripe enough to cut; and if cut at its proper season, the timothy will not be full grown.

Fourthly. By ripening slowly, it remains a longer time in a suitable state for cutting.

Fifthly. While through its large leaves it derives most of its support from the air, its large roots extending through the ground loosen and enrich it. The exhaustion of soil for a given value of fodder is much less than with timothy.

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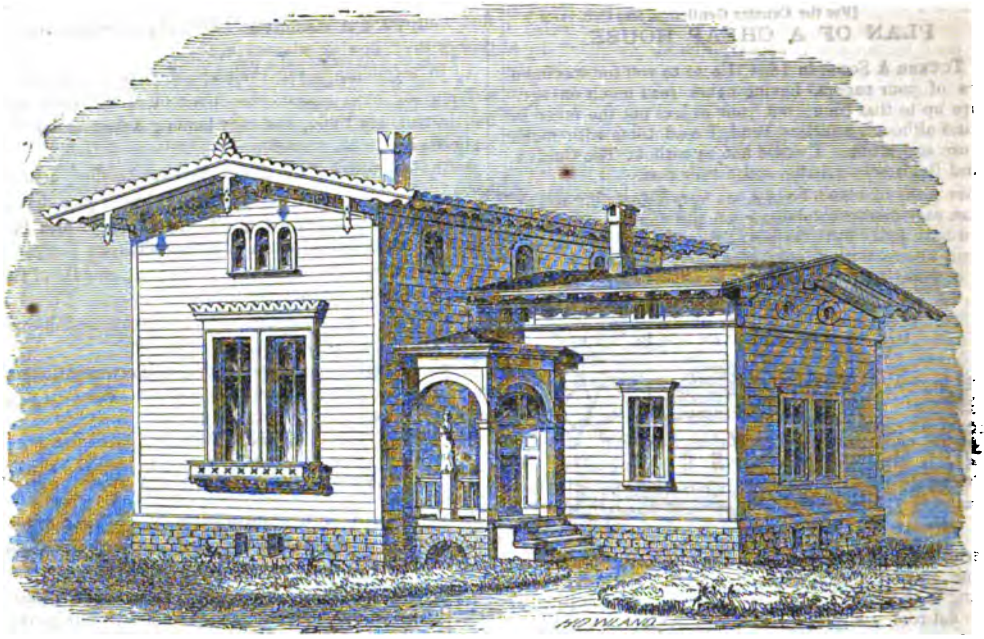
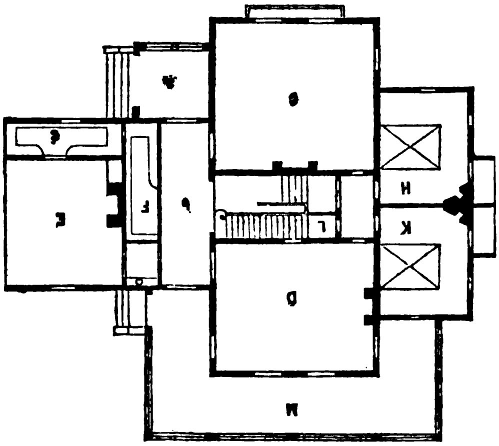
Shares' Harrow.—This harrow I think is a good implement, but the timber should be made about double as heavy, and of the toughest wood. To make it work properly I had a log weighing between 50 and 100 lbs. put on it. The shank or portions of the metal inserted into the wood, should be made somewhat longer. I never saw any implement put in wheat better. J. R. W.

Albemarle Co., Va.



NEW AMERICAN STYLE OF RURAL ARCHITECTURE.

Editors Country Gentleman—The last example of the new American style, was undoubtedly too expensive a design for a great majority who may have desired to build, or who intend to commence this spring. We intended that example, without any reference to the plan, should represent the general characteristics of the style, and as far as that motive was concerned, a great many, especially gentlemen of refinement and taste, have acknowledged our efforts by adopting designs with the same characteristics. We are endeavoring, as far as our ideas will allow, to produce a style that shall be *national and truly American ;* and it lies with the people of both north and south, east and west, to approve of our attempts or not. We desire to submit to their examination, designs with every variety of plan, hoping by so doing a better judgment can be made, whether we are to satisfy our countrymen as regards a new and National style. We submit a third example —a residence for a small family, that cost $2,500, and shows how plain and how picturesque a country cottage can be designed. To have a high roof, dormer windows, plenty of piazza, tower, or an abundance of ornament, would not make *this* design one iota more beautiful or interesting. Beauty lies in simple, yet characteristic and graceful *forms ;* ornament does not add a particle to beauty, unless the simple forms are right and in their proper place. To describe why we inserted a large window in front, three small ones above, and made the entrance porch as it is, &c., would take up too much space.



We will describe the plan briefly, and it must be understood these requirements were given by the owner, and not arranged by us. You enter by an entrance porch *a*, 7 feet square—have a hall *b*, 5 feet wide, affording an uninterrupted draft—staircase hall, 7 feet wide, leading to two bed-rooms, *k* and *h*, with fire-place and closet to each, and to passage between dining-room, D, and parlor, C. The entrance hall has door to parlor, to dining room, and to small passage with wash basin, &c., to kitchen, E. F is a store-room with shelves, and *g* is kitchen pantry, well lighted. M. is veranda, and is on the rear side, we may say, because towards the south—the front faces north, kitchen east. There is a closet, L, under stairs, for dining room. On second floor of main building are two bedrooms and bathroom.

There can be a piazza on front if desired, as well as any other change. Our desire is to represent how this style has conformed to the wishes of those desiring their own arrangement of rooms carried out. In conclusion we will state here, that we shall soon represent the adaptation of the style to brick construction, and we hope this small design will show our intentions, as remarked beforehand.

Saeltzer & Valk, *Architects*,
[See advertisement.] Bible House, Astor Place, New-York.

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Grape-Growers' Association of Connecticut.—The following are the officers elected at the annual meeting, held at Hartford, Jan. 10:

President—Daniel S. Dewey, Hartford.
Vice Presidents—C. S. Middlebrook, Bridgport; E. A. Holcomb, Granby.
Secretary—M. C. Weld, Hartford.
Treasurer—Richard H. Phelps, Windsor.

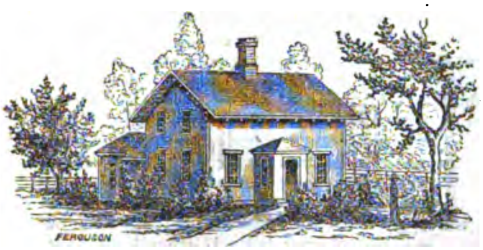
Some of our readers we doubt not, will be surprised to learn, as we do from statements at this meeting, that 200,000 gallons of wine were made in Connecticut last year, samples of some of which, made *without sugar*, were pronounced at their last State Fair equal to the choicest Rhenish wines. The Diana, Hartford Prolific, Isabella, and Concord, were the kinds of grapes recommended in their order for cultivation in Connecticut. Several kinds of wild grapes were also recommended.

[For the Country Gentleman and Cultivator.]

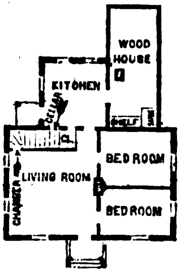
PLAN OF A CHEAP HOUSE.

L. Tucker & Son—In 1854, I sent to you for specimen copies of your papers, having never read much on agriculture up to that time; but your papers put the fever in me, and although a factory hand, I read them with much pleasure and profit. I would not be without The Cultivator and Register, no matter what they cost.

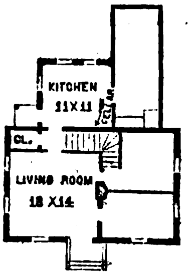
Your plans of cheap houses are very interesting to me. It is an easy matter to plan a good and convenient house, if you have $10,000 to lay out. But to plan a good, convenient house, for a family of 4 to 8 persons for from $250 to $500, there's the rub.



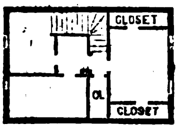
I send you a plan that I figured out, that I think is fair for the amount of room given, and the cost of such a building in the style I should recommend. I should build with a flat roof, and perhaps vertical boarding. I put the chimney in the center so it will answer for 6 rooms. The chimney for the kitchen I have put in the woodshed, close to the wall, so that there will be no leakage in the roof. I should have a set kettle in the woodshed so as to have hot water for washing, and cooking for the hogs, &c., without interfering with the kitchen. I should have one end of the woodshed furnished for a sink-room and wash-house. Every room in the house but one is lighted from two sides.



Original Plan.



Plan as Improved.



Chamber.

If you think this is worth putting in your paper, I want you to find all the fault with it you can, only let the front door alone, as I would so build the portico that I could put sash in in winter, and have open work in summer. The idea of this plan originated with the first cheap plan for Register for 1855. Joseph M. Wade. *Rhode Island.*

We have added a simple perspective view of this house; but instead of having the roof flat, we have given considerable descent to its sides. A cheap or shingle roof will leak badly and rot soon if made flat. A metal roof may be flat, but is costly. A pitch and gravel covering is hardly tested enough yet for dwellings.

We have made but a single alteration in the plan, by removing the stairs from the corner to a more central part of the house, as will be perceived by comparing the two figures. In the original plan, the stairs must be necessarily very steep, from the short space they occupy—only eight feet in length in the sketch furnished by our correspondent; while in the improved design they may be ten feet long without crowding. The improvement accomplishes the following advantages:—

1. In ascending to the chamber, there is no danger of striking the head against the low roof of the story and half house near the eaves, the landing being under the highest part.

2. By landing near the middle of the chamber, a small entry is easily made from which every room is entered, without passing through another. A closet is also furnished at the head of the stairs for bedding, &c.

3. The entrance below is also nearer the middle of the cellar, and not at one remote corner.

4. The closet or pantry between the kitchen and dining-room is larger, and is more convenient.

5. The entrance to the stairs is more convenient, especially from the kitchen, as it is not necessary to pass through the living-room for this purpose.

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[For the Country Gentleman and Cultivator.]

SLEIGHT'S PLANT-CASE.

Below you will find a description of a *Plantarium*, made by me nearly two years since, and which I find to work even better than I anticipated; in fact it is all that can be desired as a plant-case, or *parlor hot-bed* for propagation by seeds, cuttings, &c., and does away entirely the necessity of a hot-bed, except for large operations. The boilers, as arranged, will be sufficient to heat an *upright* plant-case, say 3 ft. by 3 ft. or 3 by 4 ft., and six feet high from the top of the stand, and keep the heat up to 70° to 80° in cold weather, when used in a room where fire is kept. The case could be shelved and filled with plants in pots, and the *tray* used for propagating, &c.

It first occurred to me about two years since, while an invalid confined to the house, reading an account of the "*Waltonian Plant-Case*," in the "Horticulturist." It occurred to me that a similar case might be made very cheaply by using *ready-made window-sash*, and that the heat might be applied much more economically and advantageously, than by a *simple boiler* under the tray holding the plants. I therefore made one, on *my plan*, 27 in. wide, and 29 in. deep from front to rear. The front 13 in. high, (outside,)—back 24 in. high, giving an inclination of about 45° from back to front of the top. The top sash is arranged to slide off on either side, or to lift up or off, so as to admit air when necessary.

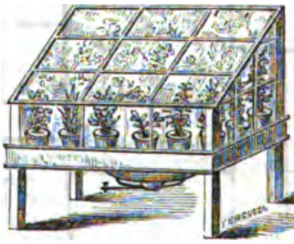

Fig. 1.

The back is formed by two glass doors, opening outward on hinges each side, (but made to fit tight,) so that the plants, &c., can be regulated or removed (tray and all) when necessary. The glass case stands on a frame forming a sort of table, *without top*. The four legs supporting the case, are stiffened by strips 3 in. wide and half inch thick all around *under the top pieces*. The legs can be made high or low, as preferred. The *tray* for holding the plants, &c., in the *case*, should be made of copper or galvanized iron, and made to fit as snugly as will permit, being raised up and drawn out when necessary. The edges, or sides, of the tray are 1½ in. deep, with stout wire around the edge or top, (to stiffen the tray,) and a handle on each side for lifting. When heavy pots are to be put in, a few small iron bars should be laid *across the tray*, (before putting in the sand,) to support their weight and prevent the tray from getting out of shape.

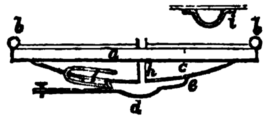

Fig. 2.

In the center of the tray, at *h* in fig. 2, is a half inch tube, about 10 in. high, through which the boilers *c* and *d* are filled with boiling water, and when not in use for that purpose, is covered with a cap to prevent the escape of steam among the plants, and to retain the heat in the boilers; and by this tube the depth of water in boiler *c* can be known at any time. There is also a small tube connecting with the bottom of small boiler *d*, to draw off the water from both boilers by a stop-cock on the left side of the stand.

With the above description, I think most persons would be able to build one. The cases, &c., may be made as large as 8 ft. by 8. ft. or 4 ft., with *inclined tops*, or 4 ft. to 6 ft. high above the stand, with *flat, tight top*, door in the rear, and shelved for *plants in pots*, as a two-wick spirit-lamp will generate sufficient heat (*in a room where fire is kept*,) to keep the thermometer up to 70° to 80°. In moderate weather there is no need of using the lamp, as sufficient heat can be furnished by occasionally filling up anew with boiling water, which can be kept hot a long time, if a *blanket-jacket* is fitted on under the boilers, when the spirit-lamp is not used.

References, Fig. 2—*a*, tray of copper or galvanized iron; *b b*, stout wire handles to lift the tray; *c*, boiler, made circular if the frame is square, or oval if it is oblong, with ½ inch flange to strengthen it when soldered on the bottom of the tray. It is about two inches deep in the center, and holds about four quarts of water. *d* is a small oval copper boiler, soldered on the bottom of *c*, holding 3 gills—*e*, a small ½ inch tube (section shown at *i*,) an inch and a half long, connecting with the boiler *d* on the right, and soldered fast to the boiler *c*, in which is a small hole which lets the water into this small tube, and fills the small boiler *d*—*f*, a small tube, also connected with the boiler *d* on the *left end*, and passes up close to the convex bottom of *c*, until near the upper edge where it is bent over and enters the boiler *c* through a hole, thence passes down to the bottom of *c*, where the water is discharged, and again enters the boiler *d* through the hole at *e*—thus keeping up a rapid circulation as long as the heat of the spirit lamp is applied.

Boiling water should always be used for filling the boiler *c*.

My case when completed cost me *nine dollars and fifty cents*, and was kept in use all last winter, in a room without any fire, at an east window. HENRY C. SLEIGHT.

Geneseo, Ill., Jan. 12, 1860.

[For the Country Gentleman and Cultivator.]

Why Farming does not Pay Better.

The question is very frequently asked, and I have had it put to me, times without number, during the past season: "*Can you make farming pay?*" I often heard the same question discussed when I was but a small lad; and as a general rule, the decision was in the negative—"*It pays poorly.*"

I received my existence on a farm, and have always labored on a farm; and although I have passed through many very discouraging times for farmers, I never remember of being in circumstances, or of seeing the time when I entertained the idea, that farming does not pay as well as almost any other occupation. I have seen many times when I almost wished that I could exchange farming for some other livelihood, but when all things have been taken into deliberate consideration—when I have estimated the loss and gain, and expenses incurred in carrying on manufactories—when I have gone into lawyer's offices, printer's establishments, editor's rooms, and into publishing houses, and have become in a measure acquainted with the vast amount of business which is constantly on hand; when I have witnessed the toil, the anxiety, the perplexity and constant losses incident in trade and barter—when I have taken a peep at almost every livelihood, and have fairly and impartially compared them all with farming—with honest, hard-working, sunburnt toil, I am induced to exclaim: Give me the farm, with the even, uninterrupted flow of happiness and enjoyment, with a fair competence, all of which every farmer may call his own; for the hot haste and impetuous rush of the care-worn citizens of our large cities and villages, have no charms for me.

I never hear a man affirm, that *farming does not pay*, without thinking—Friend, there's a *leakage* in your boiler, or a *screw loose* in some of your machinery.

Agreeable to my promise, when I was with you in Albany, I will now give you a few brief articles, commencing with the subject at the head of this article.

What would farmers, or any other class of citizens say, were they to go into any of our large manufactories where agricultural implements are made, and see one-fourth of all they had manufactured during the year, thrown aside as worthless—a dead loss—simply because they had been manufactured of unseasoned timber? What would they say, were they to go into some large cotton or woolen factory, and see bale upon bale of cloth mildewed, mouldy and rotten, because the roof of the building was so poor that it would not carry off half the rain? What would sensible people say of a merchant, or bookseller, who would attempt to keep his goods in a building that was so dilapidated and decayed, that he lost a good share of his profits by rats and mice, and water and snow, which rendered his property almost worthless? Now, this is precisely the way thousands of farmers manage; and then whimper and whine, and murmer and complain, that they "work like a dog," and receive but a poor compensation for their labor. There must be a *leakage* somewhere. Let us take a walk out on the farm, and examine the system of management. There is one bad leakage already; farming will not pay well until it is stopped. For thirty, and perhaps forty years, everything that has grown on certain fields has been carted away, and nothing has been returned to the soil; and more than this, the soil has been so wet most of the time, that it was next to impossible for half a crop to grow; but it required just as much plowing, just as much seed, just as much harrowing, and just as much to fence it, as if the land had been well drained and well manured. No man can reasonably expect to make farming pay a reasonable profit, who does not drain his fields that are too wet, and who does not return every few years, to the soil, a good supply of manure, after having taken off several exhausting crops.

There is another very bad leakage on many farms, whose proprietors are ever whining, because farming does not pay better; and I wish I could say that the error is not a common one, but I cannot; for I see more and more of it every year. I refer to cutting ditches through the barnyard, and filling them nearly full of small stone, for the purpose of carrying away the water and the liquid manure in order to make a dry yard. We cannot expect to hear anything else of a farmer, who wastes his liquid manure in this way, but that "farming returns poor pay."

Another bad leakage in farming, which is well calculated to render it a non-paying operation, is the practice of threshing most of the grain, as many farmers are in the habit of doing, in the field; and of allowing the straw to rot down in one place, without ever distributing it again in the form of manure over the fields where it grew. Such a practice is but little better than that in which everything is carried away from the fields, and nothing returned to them in the shape of manure.

When a farmer fails to provide comfortable sheds for all his cattle, and they do not have enough to eat during the season of foddering but lose from one to two hundred pounds of flesh in a few months, which is of very common occurrence, what right have we to expect to hear from him, any testimony that will tend to refute the affirmation that farming does not pay? None at all.

There is a farmer, who strenuously insists that "farming is poor business—it does not half pay." There is certainly a screw loose in his system of management.—His tools and implements are always most miserable apologies for farm implements, and are in very poor order, so that no man is able to perform a job with them in a decent manner. As a sure and certain consequence, he is always behind hand with his farming operations, and he labors hard to accomplish a little; and often loses enough in one job to purchase a set of good tools; but, as he cannot make farming *pay*, he holds on to the old ones, and labors a little harder, and gets along a little slower, and performs his jobs far less completely.

There is another consideration, by no means a trivial one, which is well calculated to bring farming into disrepute, which we meet with almost everywhere; which is a want of *system* in planning the operations of the farm, and in *executing* those plans. If a farmer is not a *thinking* man—if he does not look far ahead into the future, and lay all his plans wisely, and make calculations to appropriate all his time and energies, both of workmen and teams, to the best advantage—if he squanders away his long winter evenings, and rainy days of summer, at the hotel or at other places of public resort, when he ought to be at home, superintending labors that may be performed at one time as well as at another, or be reading agricultural journals and comparing his practices and system of management with those of other *successful* farmers, we need not be disappointed to meet with leakages which will render farming a non-paying business, as long as he follows it in the manner alluded to.

I have not noticed one-half of the reasons, why farming does not pay better than it does, in multitudes of instances; but I trust enough has been said, to set every intelligent, thoughtful farmer to *thinking*, and to induce him to make an effort to shun the rock on which multitudes have split.

The *remedy* for non-paying farming, is a plain and practicable one; and I propose in my next, to show how it may be most effectually and successfully applied.

Lake Ridge, Tomp. Co., N. Y. S. EDWARDS TODD.

[For the Country Gentleman and Cultivator.]

THE HOG CHOLERA.

MESSRS. EDITORS—Your correspondent in no. 3, does not describe the disease known as hog cholera in this neighborhood. With us it is always accompanied with excessive purging, (succeeding the loss of appetite,) which lasts sometimes a few hours, and then again one or two days, and generally when red blotches appear on the skin, and blood passes from the nose, the the disease has run its course, and will prove fatal very soon.

I had some experience with it in June, 1858. I was feeding corn, and the hogs were running in a wood pasture, and the nearest point to a public road was 80 rods, and further to any neighbor's stock. The purging first attracted my attention in the evening of one day, and 24 hours after, we had buried 8 out of 120, though at the first sight of the disorder we had removed those not showing it. Within three days we lost 25 head, when my attention was directed to an article in a Cincinnati paper, from a physician, recommending some one to try alum as a substance likely to constipate the bowels. This being a cheap remedy, I prepared a bucket full of very strong solution of alum in cold water, and with a rope and slipnoose, a horn with small end sawed off to the hollow part, proceeded to dose all I could find affected. With the rope behind the tusk, we could keep the mouth up, and by shaking could compel the animal to swallow the drench poured through the horn. Out of 28 we drenched, only five died, though three were in the last stage, and were already bleeding at the nose, two of which were saved. I also fed to the lot a pound of pulverized alum in a bucket of middlings per day —fed to them as I would salt at their feeding ground—and in the course of two weeks all signs of the disease was gone; except the change in the appearance of the hogs that had been attacked, which had generally been the finest and thriftest in the lot, but soon took the other, and many never recovered so as to make good pork when the rest were ready for market in November.

This being a very cheap and simple remedy, I would be glad to hear of others trying it, and report if it prove successful or otherwise. We have had none of it in this neighborhood since the summer of 1858.

Clark Co., Ohio, Jan. 21. J. T. WARDER.

[For the Country Gentleman and Cultivator.]

Homœopathic Treatment for Fowls.

Some of my fowls have been attacked by a swelling and sealing of the eyes. After using a lotion of arnica with some success, I had one whose eyes were so bad that I despaired of his recovery. One eye I thought, past recovery; but hoping to save one, I commenced the administration of belladonna—a few globules in a little water. Before giving it, I washed the eyes in the arnica lotion, and turned out of them a mass, that looked like a kernel of corn in size and color, (a pale yellow.) After the administration, in about eight hours. I found both eyes open, so that he was enabled to eat. I then discovered that his head was terribly affected—in short, he exhibited all the symptoms of roup, as described on page 108 of the Cultivator for 1857, (and a very bad case too,) viz.: running at the nose, and almost choking with phlegm. I then commenced doctoring him as for influenza, giving one or two doses of aconite in alternation with arsenicum, with an occasional dose of belladonna for the eyes. The effect of the medicines has been marked, and he is now nearly well—sight nearly restored—running about eating and drinking freely as ever. His head has been badly frozen, and he therefore yet requires care; but if the weather was warm and dry, I should have no fears of turning him out with my other fowls. Being a Dorking, and having been at some pains to exchange for him, and knowing of no other chance to get one at *any reasonable price*, has alone caused me to take so much pains with him. W. E. C. *Cleveland, O.*

[For the Country Gentleman and Cultivator.]

Lime for Fowls.

In winter, when fowls have less access to the ground, or when they are confined in small enclosures, they have less opportunity to select the mineral substances which they require; hence, an artificial supply becomes necessary. How shall this be given? We answer, by placing the articles within their reach, so that they may take voluntarily, just the quantity which they are prompted by nature. Place slaked lime, broken into small pieces the size of peas, on shelves where fowls can readily pick it up. By slaking lime in a vessel, in considerable water so that it will form a paste, and letting it dry, it can readily be broken into the desired form in which it appears to suit the fowls best. Old mortar and broken shells, where they can be had, will answer the same purpose

Eggs are, if at any time, a luxury in winter, and whatever promotes their production is of interest to the majority of our readers.

The wants of poultry for lime are very clearly shown by a correspondent of the Boston Medical Journal, in the following amusing article: "A most pleasing illustration," says the writer, "of the want of lime, and the effects of its presence, came under my notice on my voyage from South America to 'Sunny France.' We had omitted to procure gravel for our poultry, and in a few days after we were at sea, the poultry began to droop, and wound up their afflictions with the pip, or, as the sailors term it, the scurvy. Their feathers fell from their bodies, and it was perfectly ludicrous to see the numerous *un*feathered tribe in the most profound misery, moping away their time in an utter state of nudity. Amusing myself one day by fishing up gulf weed, which floated in immense fields upon the surface of the ocean, I shook from it numerous small crabs, about the size of a pea. The poultry with one accord, aroused themselves from their torpor, and seemingly, as if by instinct, aware of the therapeutic qualities of these interesting animals, partook of them with greater avidity than any invalid ever swallowed the 'waters' of the 'springs.' After a few hours the excellence of the remedy was apparent; the roosters began to crow, the hens began to strut and look saucy, and in a few days all appeared in quite a holiday suit of feathers, derived from the lime, the constituent part of the crab shells." C. N. BEMENT. *Springside.*

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HE is happy whose circumstances suit his temper, but he is more happy, who can suit his temper to any circumstances.

[For the Country Gentleman and Cultivator.]

THINGS IN IOWA.

State Ag. Society.—The annual meeting of this Society at the Capital, second Wednesday in January, elected Hon. Ex-Chief Justice George G. Wright of Keosauqua, Van Buren county, President; Mark Miller, our very excellent editor of the North Western Farmer, Vice-Prest.; Hon. J. H. Wallace, Muscatine, re-elected Secretary; M. L. Morris of Iowa city, Treasurer; Jos. Bridgman of Muscatine, Chief Marshal. The next State Fair is to be held at Iowa City, Oct. 2d—four days.

Some time ago the manufacturers of the Manny Reaper offered one of those valuable machines as a premium for the best five acres of wheat, to be awarded by the State Ag. Society. The result was—J. S. Hunt of Benton Co., 42 bushels 51 pounds per acre—variety "Canada Club." D. C. Lindley, Johnson Co., 30 bushels 16 lbs.—"Spring Tea wheat." Drury Overton of Marion Co., 26 bushels—"Wild Goose." The premium was awarded to Mr. Hunt. This was a very unfavorable season for wheat in all the southern part of the state, and a partial failure in the central.

Iowa Farmer's College.—I have but little to write in regard to this institution. You were informed that the trustees located it in Story county last June, near the center of the state, upon a piece of wild land, of prairie and timber. Owing to our limited means, we have made but little improvement. There is barely funds sufficient to put up a farm-house and barn, and open a quarter section for farming. It is hard times out here in Iowa, as you may know by the report of your subscribers, and it is doubtful if our Legislature appropriate money to build a college before the next session, which is two years. The Farmer's College of Iowa was earnestly commended to the favorable consideration of our Legislature, by our very worthy Governor, J. S. Kirkwood. A large majority of our people look upon it with favor, and will move it into active life as soon as we can gather a little material aid in our private and public purse.

If it is true that daily manual labor will preserve the health of the student—will help the poor scholar to pay his way—if it is true that our farmer's sons, mechanics, professional, and sons of the city, ought to learn something of Agriculture, Horticulture and Forestry, *practically*, and never to depart from the respect and honor of industry, so true will these Agricultural and Horticultural Industrial schools prevail, extend and multiply, until this nation shall be a nation of men and women in the broadest sense of numbers, in intelligence, integrity, domestic and national happiness, wealth and physical strength, such as the world never saw.

Wild Land—Government Lands.—I am comparatively an old resident of the west, and have for the past year traveled considerably over this state. I lament to see so great an extent of our lands bought and lying unoccupied. Our settlement of 700,000 is scattered over 56,000 square miles. This scattering of our population over so great an extent, is a serious detriment. There is something radically wrong in our government putting up land at auction, and making merchandize of it for speculation. This practice of our government leads and encourages men into ruinous folly—not merely ruinous to individual prosperity, but still more ruinous to public prosperity. I have never thought it very wise policy to *give* a *home* to any one who will ask, but to *sell to actual settlers only*, and that too without profit to the government. Suel Foster.

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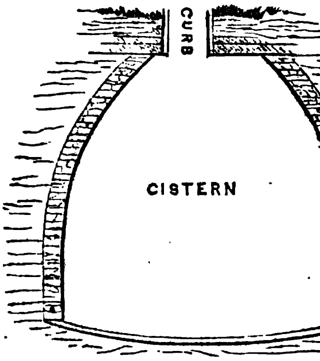
Bucks Co. (Pa.) Ag. Society.—This Society held its annual meeting at Newtown, Jan. 19, when the following officers were elected:

President—William Stavely.
Vice-President—Adrian Cornell.
Recording Secretary—John S. Brown.
Corresponding Secretary—E. G. Harrison.
Treasurer—Jacob Eastburn.
Managers—John Blackfan, Solebury; Lewis Buckman and Samuel Buckman, Newtown; Wm. R. Beans, Upper Makefield; David Cornell, Northampton; Jos. Fell, Buckingham; Cyrus Hillborn, Wrightstown; Hector C. Ivins, Falls; Jonathan Knight, Southampton; John Kelsey, Lower Makefield; Isaiah Michener, Buckingham; James W. Newbold, Middletown; John Robbins, Falls; Wm. T. Rogers, Doylestown Edward H. Worstall, Newtown.

FARM CISTERNS.

Messrs. Editors—Will you please inform me the best and most economical manner of building cisterns for the farm-yard; also the size requisite to supply a stock of say 60 or 100 head of cattle during the winter. A Subscriber.
Perth, C. W.

Cisterns are often made by digging out a space about the shape of, but larger than a potash kettle, plastering the bottom and sides with water-lime mortar, and covering the top with timber and plank, and then with a foot of earth, to prevent freezing, leaving a curb through which the water is drawn, the cistern cleaned, &c. But the top being broad, requires much timber to cover it; and this covering, unless supported by posts, will be apt to fall in in a few years. It is better to build a wall of stone—a foot thick will do, in the form represented in the annexed cut.



The wall being built as an arch, can never fall in, and the earth being packed well outside, it cannot burst by the pressure of the water within. The amount of plank to cover it is small, and it is very capacious.

Cisterns are commonly made much too small. About three feet of rain falls each year, or 72 barrels on ten feet square, or over 2,000 gallons. Cattle will drink an average of six gallons a day or more, and rather over ten feet square would therefore be required for each head. But as these only drink from the cistern in winter, half that surface may answer—and 100 head would need a roof 50 feet wide and 100 feet long, or its equivalent; which would afford yearly no less than 3,600 barrels.

The cistern should hold at least one-half of all that falls in each year, and should therefore have a capacity of about 2,000 barrels. To hold this amount, ten cisterns, each 10 feet in diameter and ten feet deep, would be required; or two each 20 feet diameter and 12 feet deep, or one 30 foot in diameter and 11 feet deep.

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Tea Spring Wheat.—I noticed in the Co. Gent. of Jan. 19, (p. 44,) short notice of the *Tea Wheat*, a description of color, &c. Allow me to state that that variety of wheat was sown in this county to some extent, and has proved itself to be as valuable a variety as it was recommended to be. It is a very heavy wheat, weighing more than any other variety of spring wheat known. My neighbor says his crop will turn out one-third more than any other variety ever sown, and will weigh 66 lbs. to the bushel. The kernel is very plump, large, and extremely hard, and grinds equal to any winter kinds. The bread is white and sweet, (knowing from experience.) All who had the genuine Tea Wheat are loud in its praise. My seed was purchased from the Shaker seed-store, and weighed 64 lbs. to the bushel. I sowed the same on clay soil, and am perfectly well satisfied with the result. Will send you a sample of the true seed. A Subscriber. *Buffalo, N. Y.*

THE YALE LECTURES.

New-Haven, Ct., Feb. 15, 1860.

The course of Lectures has now progressed to more than half its allotted limits, with no symptom of abating interest. The attendance I find to be just of that kind, in a large degree, which it was the first object of the projectors of the course to draw out, that is, farmers and farmers' sons. The first week, when Scientific subjects were mainly under discussion, the numbers present I understood were from a hundred to a hundred and fifty. The second week, when Horticultural matters came before the "convention," larger audiences still were collected, owing to the greater interest taken by those in the vicinity in Garden and Orchard culture. The present week is devoted to Practical Agriculture, and next week to Domestic Animals. By looking over the register of names, I ascertain that some thirteen States and Canada are represented, and it has been a matter of gratification to recognize, as I have done, the names of most of those from a distance, as among the constant readers of the COUNTRY GENTLEMAN.

The morning sessions for discussion open at 9 o'clock; there is a lecture at 11, and adjournment for dinner shortly after its conclusion; the second lecture takes place at quarter past two, and the third immediately succeeds—an arrangement made because many were found desirous of taking the evening for return home. But there have been discussions or extra lectures nearly (or quite) every evening, so that no available part of the 24 hours is wasted. Prof. PORTER and his coadjutors appear to regard the success of the Course as quite as great as the most enthusiastic could have anticipated, for a beginning; moreover, the generosity of a New-Haven gentleman, eminent for his public spirit and for the munificence he has shown in assisting to develop the Scientific Department of the College, stands behind Prof. P., I suspect, to afford that absolute certainty of pecuniary solvency to the undertaking, which was so necessary to its satisfactory progress. It is to be hoped, however, that the tickets sold will have sufficed to cover the expenses incurred, without recourse to this proffered liberality.

In the *N. Y. Tribune*, the *N. Y. Times*, the New-Haven, Hartford and other papers, reports of the lectures have been given from day to day. It was considered impracticable to present abstracts in the Co. GENT., because so much has been going on that an adequate summary would have been quite inadmissible with such a constant pressure of other matter as the present season of the year always affords, and an attempt at very close compression can only be made at the hazard of conveying wrong impressions, and often at the entire forfeit of all the real value of what is said. I am glad to notice, however, that the reports of what I have been personally present to hear, are in general so truthful and accurate; and I have no doubt that the wide dissemination given to them, will attract greater public attention to similar courses that may hereafter take place.

It had been objected by some that so constant and protracted attendance must become wearisome before the month is over. But while the audiences are in some measure constantly changing—some selecting one week or one series of subjects, and some another—I have met with a number of those who are here for the whole course, and I have been pleased to hear from very practical and entirely disinterested sources, a uniform expression of entire satisfaction with all they have thus far seen and heard, and of belief in the usefulness and value of the scheme as thus realized, beyond the expectations they had formed.

It it not impossible that in undertaking the project a second time, *less* rather than *more* would be put down in the programme. Somewhat less of opportunity has been given for general debate than was perhaps expected, but it may be quite as advantageous to listen to the well considered opinions of the invited speakers as to join in a rambling *talk*. And, particularly with those to whom such meetings are an entire novelty, it would be difficult to devise a plan better calculated, as I think, than the present—to enlarge the views, convey knowledge of a practical sort, prompt to more activity of mind, and lead to pleasant and profitable associations, both as regards the lecturers—among whom there are some whose acquaintance is a good thing to put within any young farmer's reach, while no object is perhaps of greater importance than to bring him into more immediate contact with others of his own class, to awaken in this way his interest in what they are doing—his ambition as to what he can himself accomplish, and lastly, to arouse a better appreciation of their pursuit in the minds of those ready to forsake it. L. H. T.

Durable Whitewash.

MESSRS. EDITORS—Can you give me through the columns of the Country Gentleman a recipe for making whitewash that will last for a number of years exposed to the weather? I have heard of some substance which may be added to common whitewash so as to make it last for five years or more—but have fogotten it. If you know what it is, please oblige a ubscriber. D.

We have tried many kinds of lime-wash recommended for their durability, but we never yet found anything at all equal to *oil-paint*. They are always more or less soaked by every rain that falls upon them, and when this is followed by a frost before they become quite dry, they crack and scale off. Whitewashing, however, if repeated every year or two, is cheaper than paint, and assists greatly towards rendering fences, out-buildings, &c, more durable and especially prevents the growth of moss. A comparatively cheap oil-paint for such structures may be made by mixing ground water-lime and some gypsum with the oil. A portion of ochre will modify the color.

If any of our correspondents know of a durable and cheap whitewash which has stood the test of years, we should esteem it a favor if they would describe it, the mode of application, and what it has accomplished.

[For the Country Gentleman and Cultivator.]

How to Make the best Ice Cream.

MESSRS. EDITORS—I fully intended answering Jenny's appeal for a recipe for ice cream, but idleness prevented until I found myself anticipated, this week by "an old subscriber." As however, I think my own infinitely the best, and having a rural antipathy to those wretched substitutes for eggs, so much in vogue now-a-days, whether isinglass, arrow-root, flour, Oswego starch, or what not, I will still copy mine, which has been pronounced (when well and *smoothly* frozen,) as good as the very best. I will only observe, that its quality greatly depends upon the freezing, as well as on the richness of the milk, which must always be new milk, with as much cream as you can afford. Mine is often made entirely of milk, but a proportion of cream greatly improves it.

To every quart of milk, take three eggs and a heaped up cup of crushed sugar; put the milk and sugar in a tinpail and set it in a kettle of boiling water over the fire; stir it occasionally to dissolve the sugar, and when nearly scalding, take it off and let it stand a few moments, while you beat your eggs well up; then stir them into the milk and put it over the fire again, stirring it constantly until it thickens, but do not let it boil or even curdle—take it off; and when nearly cold, flavor it to your taste and send it to the freezer. I think I use a half a bottle of Mitchell's or Meakim's extracts of vanilla, to every four or five quarts. H. H.

P. S. My cook, whom I taught to make it, corrects some of my measurements. She says she always adds a little extra sugar; generally another cupfull, when making six quarts, and so in proportion; and also that a bottle full of extract is not too much for six quarts.

PRUNING PINE TREES.—A writer in the N. H. Journal of Agriculture, has been pruning his pine trees in the winter, sawing off neatly one tier of branches each year, and he finds the wounds heal over fast, and the trees look green and healthy, while those prnued in the summer with an axe, several tiers of branches at a time, look stunted and sickly.

[For the Country Gentleman and Cultivator.]

WILSON'S SEEDLING STRAWBERRY.

This is a variety that is fully worthy of the high commendations it has received, and it is decidedly the most prolific of any variety I ever cultivated, and the number somewhat exceed 40. It succeeds well upon almost any soil, and bears abundantly. I have seen accounts of large yields from this variety, but last season I had the curiosity to determine how much could be raised. I measured one bed, 16 feet by 17 feet, and measured the berries, and obtained 8¼ bushels, which would be at the rate of 560 bushels per acre. The plants were set 2 feet by 1 foot, and allowed to cover the ground, and the above is the result. The bed has now to be turned under and manured and re-set. I have found this method to be the least trouble, but the beds require to be renewed every third year. The old plants usually exhaust themselves, and require the thrifty runners to renew with. WILLIAM NEWCOMB.

Rensselaer Co., N. Y.

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[For the Country Gentleman and Cultivator.]

TOBACCO CULTURE.

MESSRS. L. TUCKER & SON—I notice that inquiries are occasionally made through the medium of your columns, for information in regard to the cultivation of tobacco. Having had some experience with this crop, I venture to supply you with a few remarks which its consideration suggests.

There is no hand-book on the subject. No person should think of raising tobacco to any extent unless he knows all about it, or has in his employ some one who does, that he can depend on. Every part of the process, from the time you undertake to prepare the ground for your seed plants, in March or April, till it has undergone its last manipulation in the winter following, requires close attention, a nice judgment, and a thorough acquaintance with the business. I should recommend to any person determined to engage in the cultivation of tobacco, but without experience himself, to procure the services of some one else who has, to raise one or two crops for him. He should hire his labor from a tobacco district, the valley of the Connecticut River for instance, for one or two seasons, after which he might attempt its management without such assistance. It is a good way to adopt the Connecticut River plan—that is, for the owner of land to furnish the ground, properly fitted with the sheds for curing the crop, and let it upon shares or for a money rent, to another, to perform the labor. This is done to a great extent at the east. The proprietors of river bottom, especially along the Connecticut, provide land, manure, housing, &c., for which a rent of fifty dollars, and I think one hundred per acre, are paid. The crops thus produced will sometimes amount to $300 per acre. The tobacco raised in this county has occasionally sold for that sum. The cultivation of tobacco has been carried on in Onondaga county for ten or fifteen years, having been first introduced from the Connecticut. It is now grown mostly in small parcels, many of the farmers in some of the towns planting from half an acre to two acres, which they can take care of without its interfering with their main business, and with no special outlay for shed-room. Tobacco is an uncertain crop as to price, and if grown to the extent of five or ten acres, requires a considerable preliminary expenditure for curing sheds. It is doubtful whether its cultivation at the north is permanently beneficial. Ten acres would consume all the manure which could be produced on a large farm with the ordinary amount of stock. But when extraordinary facilities are enjoyed for obtaining manure, nothing pays better. A gentleman in this city furnished ground and manure from a distillery, for 15 or 20 acres, last year, which was worked on shares, and the same parties are making preparations to plant 35 acres in the spring. A distiller in the western part of the county has raised even more. But this can only be done where manure can be obtained in abundance. I presume that men could be hired who have worked in the tobacco fields of this county, capable of taking charge of a crop, though they might demand more than the ordinary rate of wages. There are Yankees enough to be had on the Connecticut River on similar terms. Any person who imagines that he can grow tobacco successfully or profitably, from written or printed directions, has only to make one trial of it to be convinced of his error. It is an art only to be acquired under the instructions of a master.

Northern tobacco is grown principally for segar wrapping, for which its thin leaf is especially adapted. Calcareous soils produce the finest qualities. The crop of 1858 raised in Cayuga and Onondaga counties, mostly the latter, was estimated at 4,400 cases of 400 pounds each, and at 10 cents per pound was worth something like $175,000. The last was an unfavorable season, and I have no definite information as to the quantity produced or its value. V. W. S. *Syracuse, Jan.* 25, 1860.

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Cost and Profit of Hens.

MESSRS. TUCKER & SON—Having been a subscriber for the COUNTRY GENTLEMAN for some time, I have been somewhat interested in the various articles from your correspondents, tending to develop the best methods of productive industry, as well as being enlightened by perusing them. If my experience with poultry will add anything to the common stock of knowledge on that subject, I give you the result of my experience from Jan. 1, 1859, to Dec. 31, 1859. As I was but a novice (when I commenced "the science of henology," some two years since) as to their habits, proper feed and nature, I have been obliged to learn everything in relation to that subject by experience. I commenced the year with 58 hens and two roosters, Black Spanish breed with a cross of about 1-18th of Game and Leghorn. I give you the quantity of eggs for every four weeks, from January 1, 1859, to December 31, 1859, as follows:

Four weeks to Jan. 28......	298	Am't brought up...........	6,134
" Feb. 25......	678	4 weeks to Sept. 8........	[illegible]
" Mar. 25......	971	" Oct. 6........	420
" April 22, ...	1068	" Nov. 3........	294
" May 20, ...	955	" Dec. 1........	348
" June 17,......	861	" Dec. 29........	306
July 14, ...	720	" Dec. 30 and 31,	20
Aug. 11,......	593		
	6,134	Total in one year,....	8,013
		or, 667 doz. and 9 eggs.	

Eggs have averaged in our market over 25cts. per doz., which will make the total of 667 doz. 9 eggs at 25 cts.,	$166.94
My family have consumed about 30 fowls, at 37½c.	11.25
My stock now is 73—increase of stock 13, at 37½........	4.88
	$183.07
I have kept an accurate account of the cost of food. When I have given them corn of my own raising I have charged it a $1.00 per bushel. The whole cost of food has been,..............................	99.25
I carry to the account of Profit and Loss, Cr. side,...	$83.82

About a dozen of my old hens have died. My chickens came in late. I have had but few eggs from my young chickens. The average of my laying hens would not exceed 50, which would give an average of about 160 eggs to each hen. B. *Newark, N. J.*

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Barley Meal and Shorts for Cows.

MESSRS. EDITORS—I wish to know the relative value of barley meal and shorts for feeding cows giving milk, which would make the best feed, say three quarts of barley meal or four quarts of barley meal and shorts, equal portions of each, daily? I wish to feed about that quantity in addition to hay and roots. The milk is used for butter making—barley is worth about sixty-three cents a bushel, and shorts one dollar a hundred, consisting of the coarse and fine bran, without that portion termed ship stuff. I have usually fed a mixture of the above, but have some doubts about the utility of feeding shorts to make rich milk. My mode of feeding is to add scalding water sufficient to make a thin slop, and feed it when cold. I prefer this way to feeding it on cut straw or hay. I should also like to know the value of brewer's grains as a feed for cows—it can be obtained here for eighteen cents a bushel—will it pay at that, and is it suitable feed for cows giving milk? By giving the desired information through the Co. Gent. you will greatly oblige J. L. R.

We know of no definite experiments to determine these points—nor do we know the prevailing opinions of intelligent farmers who have given these materials for food a thorough trial. Barley meal makes a rich feeding—at its present low price, it is thought by some to be the most profitable food for cattle. We have used it ground with corn in the cob, and find it excellent.

[For the Country Gentleman and Cultivator.]

ON FEEDING CATTLE AND SHEEP.

A Young Farmer, p. 60, Co. Gent., asks me to give him information about buying and fattening stock. It is almost impossible to do this on paper. It is one of those things that has to be learned by experience, and I have often advised beginners to commence on a small scale, and feel their way cautiously. One great error in many, is that they get alarmed for fear they are going to lose by the operation, and sell their cattle before they are half fat, which almost never pays. For instance, if you feed 100 days, they will generally gain more the last 35 days than in the first 65. Others again, when they think they are not making fat fast enough, (as all men unaccustomed to feed will,) are apt to feed too much meal. Cattle that have been kept on poor fare, cannot stand much meal the first two months. I can put on more fat on such cattle with three or four quarts of corn-meal or its equivalent in other feed daily, with right good hay, than with double the quantity of meal. Take three or four year old steers of good quality, and an average of four quarts of meal with good hay for 100 days, and they will make prime beef with me. In 100 days, aged oxen will require much more meal, but I never made any thing by fattening oxen unless bought very low. You get no growth on them—only the fat you put on.

Farmers that intend fattening cattle, should always buy those of good size of their age. It takes no more to fat a steer that weighs 1,400 lbs., live weight, than it does to fat one weighing 900 or 1,000 lbs., and the largest will always gain the most with equal feed, if they are of the same age. Then when fat, the largest are worth more per pound to the butcher; so there is a profit every way in fattening cattle of a good size according to their age.

Then again I have seen men undertake fattening cattle, and think they must be stabled all the time, and only let out to get drink. I think it is very far wrong; for many years I have only stabled them while they eat their meal, feeding their hay in open yards in boxes. They have the liberty of large sheds to go out and in as they choose, with both sheds and yards thoroughly littered with straw, and in this way my cattle are always as clean as they are in summer when in the fields. Cattle won't lay down in dirt if they can get a clean place. I only, or at least seldom, buy sheep or cattle oftener than once a year, unless I sell in February, and buy half fat ones to finish off before May.

I have given my mode of fattening sheep so often that I think a "Young Farmer" must have read it. One thing I will tell him, that it takes no more feed to fat a lot of sheep averaging 140 or 150 lbs. than it does the same number averaging only 85 or 90 lbs.; therefore it is far more profit to feed heavy sheep than light ones. I have heard men I thought of great knowledge, say that every animal eat according to their size but man, and for a long time I believed it; but when I came to feed steers meal in stalls, some weighing 1,000 lbs., some 1,500 lbs., and found the largest putting on the most fat and gaining most in weight, which they always do, I found those mens' theories would not stand the test when tried by practice.

I look upon experience as being of vast importance to the farmer, and farmers can if they choose, make many experiments at little cost, even if they don't succeed; but I would not advise a "Young Farmer," or any one else, to go into fattening stock largely for market, especially in winter; but I would advise every one to feed their regular stock much better than is generally done throughout Western New-York. I know men who keep, say 25 head of store cattle, that don't pay any profit, and another will keep 5 or 6 that will sell for more than the other 25 or 30, and make a good profit; and the same way with sheep. An immense improvement can be made on the Merino sheep; if only thoroughly kept the year round, they can be made to weigh from 130 to 150 lbs. and more when fat, and at a great profit—more so I think than any other kind of sheep or cattle either. But farmers in general think any feed may do for sheep—fallows, woods, stubble-fields, and even the highways, and in fact the latter is often their best pasture. Now if men would only reason on the subject, and think how their horses, or milch cows, or fancy cattle, if they have any, would do with such treatment, I know there would soon be a great improvement in stock generally, and in nothing more than in the Merino sheep. Where you find a farmer who has purchased a few Leicesters or South Downs at a high price, those he feeds well, and he gets well paid for it, and I am convinced that Merinos would pay him better if he would give them the same feed. JOHN JOHNSTON. *Near Geneva, Jan.* 31.

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[For the Country Gentleman and Cultivator.]

USE OF SPARRED FLOOR STABLES.

MESSRS. TUCKER & SON—I am not accustomed to write for the public eye, but I notice you ask for the views and experience of your readers on the use of sparred floors. I keep from sixteen to twenty cows on sparred floors. They suffer no inconvenience. I use no bedding except in the coldest weather. I have a cellar under the stable, eight feet deep, into which the manure drops. Not having muck, I use earth from headlands to mix in to absorb the urine. We draw the earth and put it in a pile convenient to the stable, any time when it is most convenient.

In my stable are two rows of cows, heads from each other, tied in stalls six feet wide, and two in a stall. I have a double door, wide enough to drive a horse and wagon with dirt into the stable. The barn stands on a side-hill. The manure is easily removed, as we back the cart up to it, under the barn. When the cellar is empty we cover the bottom of it a foot or so with earth, and then earth is added from the pile or field as suits our convenience, from time to time, at the rate of from eight to twelve loads per week.

In this way I get a large pile of excellent manure. It is not very hard work, for we drive a horse and wagon with the dirt into the stable, and if the dirt is fine, we throw it on to the floor, and it passes down readily with the manure, just where it is wanted—if not fine, we throw it down the scuttles.

Perhaps I ought to say that my cows run in the pasture during summer, and are stabled nights, and fed a little green fodder when the pastures are short.

Some may think it hard to get dirt from a pile out-doors in winter. But I find by practice it works well. Last fall I made a pile 12 ft. by 30 ft., 8 ft. high—the outside froze a foot thick or more. When we wanted dirt we took our picks and made a hole of sufficient width to back in the one-horse wagon. After getting what dirt is wanted for the time, the entrance is closed with straw, and the frozen earth forms both walls and roof. When we want more earth, remove the straw, back in the wagon or sleigh, and it comes easy. In case of a long thaw the roof may need some support. The center of the pile is considerably the highest; this allows the water to pass off free, and perhaps adds strength to the roof. M. S. K.

Chicopee, Mass.

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LARGE YIELD OF CARROTS.

A correspondent of the *New England Farmer*, writing from South Danvers, says—"Mr. B. H., one of the most successful cultivators in this town, informed me that he had gathered six tons of as handsome carrots as he ever saw, from thirty-seven square rods of ground. This would be about one ton to six square rods, or about twenty-seven tons to an acre," &c.

Although this is a heavy crop, it will not compare with some crops of the same vegetable grown here. For instance, in the fall of 1858, Mr. Wm. H. Starr, proprietor of the East New London Nurseries, gathered from eight square rods of ground, seventy-five bushels of splendid carrots, of the long orange variety, being at the rate of 1500 bushels, or forty-five tons to the acre; and the present season, (1859,) he gathered from five square rods, orty bushels of the short *horn* variety, being at the rate of 1,280 bushels, or more than thirty-eight tons to the acre; and this on land not better than an average of this entire field. Can any of your correspondents inform us of a larger yield from ordinary cultivation? H. E. C.

Inquiries and Answers.

Cutting Fodder.—How short should fodder be cut for milch cows and young cattle? The machines in use here cut it in lengths varying from three-fourths of an inch to three inches. Which is the proper length, and why? *Cheshire Co., N. H.* [When hay and straw only are to be cut, for the purpose of mixing them together, (as well as for having short manure,) an inch or two in length will answer, and some animals even like them better than if shorter. But for *corn-stalks*—which are doubled at least in value by cutting properly,—the length should not be greater than about the fourth of an inch, and such a machine should be driven by horse-power. If the length is greater than this, many hard, woody lumps will not be eaten. The nearer that the stalks are reduced to the state of a powder or fine chaff, the more freely they will be eaten, and the better they will be digested. If cattle will not eat them well at first, a little meal intermixed, and some salt or brine sprinkled thinly over, will render them palatable.]

Underdraining.—Much of our land in this country is what we term a cold clay soil. It generally produces grass very well, but is too wet for anything else, except in summer after it is too late to put in a crop. It is in many places wet on the side of a hill, the water not seeming to come from any one channel, but to issue from the ground as much in one place as another, rendering sometimes several acres in a place unfit for the plow, and if we make a ditch it will be as wet within ten feet of it as it was before. Now what I wish to know is whether such land can be profitably underdrained, and how? K. C. *Deerfield, Va.* [We have met with similar land, and have underdrained it profitably. We would recommend parallel drains, three feet deep, and two rods apart, the shortest way down hill. These will be likely to tap all the subterranean puddles and springs, and carry their contents speedily off; but if any wet spot remains afterwards, a side ditch will tap it. A single ditch may fail to accomplish the object; but a series of parallel ditches scarcely ever fails. We should have no fear whatever. Tile is best and cheapest, but stone will do; and if the quantity of water is small and the descent steep, brush will do.]

Paint for Barns.—Can you inform me through your columns what is the cheapest and most durable paint or wash for old buildings. I have on my farm two barns that have been built 15 or 20 years. They are in a good state of preservation, and only lack a coat of paint to look well; but as they have been exposed to the weather so long, it will take a large quantity of oil to paint them. If you or any of the readers of the Country Gentleman can give me any information or advice how to paint them well and cheaply, you will much oblige A. Subscriber. [We think a coat or two of good whitewash first given to these old exposed surfaces, will serve to fill the pores of the wood, which would otherwise absorb a great deal of oil. In the course of a year, when the lime has lost all its caustic quality, and will no longer make soap of the oil, the paint may be applied. Whitewash alone, if repeated biennially, would be very useful.]

Cobble-Stone Floors.—Have you or any of your correspondents used cobble-stone for stable floor, and are they as good or better than plank? A Subscriber. [We have seen cobble-stone, laid as a pavement, for the floors of cattle stables. They must be solidly as well as evenly laid; solidly, or the stones will work loose, or the pavement become uneven; and evenly, or they will be unpleasant to the cattle and hard to clean. They require a free use of litter to make them comfortable. They are of course, very durable, if well laid. As it has been found injurious to horses to keep them in a basement stable, cobble-stone cannot be well used for them. The practice of filling in the interstices and coating the surface with water-lime mortar will answer only in such places as are free from frost, which soon cracks and spoils wet hydraulic mortar.

Artificial Stone Cellar Walls.—Can some of your correspondents inform me how to make artificial stone, and will a house built of it stand the frost well; and how will it answer in building cellar wall, where stone is scarce, to lay in blocks of wood instead of stone? How will it do to plaster on the bare earth, a part of the way, instead of building a wall from the bottom of a cellar clear up to the floor of the house? A. B. [The first question we must leave for such of our correspondents as have tried artificial stone. Blocks of wood will not answer instead of stone, except when set in the wall merely to drive wooden pins in, or to nail to—in which case they should be in the dryest places. Near the earth, they would shrink and swell by dryness or wetness, and soon decay. On very hard smooth earth, water lime might be used, without building a wall, if it were possible to have a stone wall foundation above it. Frost soon cracks water-lime; and to have it for the lower portion, and common stone wall for the exposed part, would be entirely incompatible with solidity.]

Strychnine for Rats.—I noticed in the Cultivator, that some of your correspondents advise the use of strychnine to destroy rats. Do you think that the use of it would be safe in a barn where the rats have access to the hay-mow, corn-stalks, and rutabaga cellar? A Subscriber. [If the pure or concentrated strychnine is used, it will probably finish speedily every rat which partakes of it before he has had time to scatter much. It is well, however, to use caution, that nothing voided by them is mixed with the roots or grain before it is fed out. The danger is small.]

Hay and Corn for Feeding.—Can you or any of your readers inform me of the value of good hay compared to corn as feed for wintering cattle and sheep—which is the cheapest to purchase, hay at $12 per ton, or corn at $1 per bushel? C. C. B. *St. Albans Bay, Feb. 2d*, '60. [Authorities as well as experiments vary considerably as to the relative value. Difference in the quality of the hay no doubt has partly produced this variation, as well as the condition of the corn and the peculiar character of the animals. But the average places hay as little more than one-half the value of corn, of equal weights; say 50 lbs. of corn equal to 100 lbs. of best hay, would make 20 bushels of corn equal to a ton of hay. The hay is therefore much the cheapest. A little corn, however, well ground, and given daily in connection with the hay, may be profitable, as mixed food is found best.]

Cobs for Food.—Will you give us your opinion as to the value of the corn-cob ground with the corn; it is a general practice here to grind them together, and has been mine until latterly, when I have come to the conclusion that they (the cobs) are only fit for fuel; and now I shell all my corn giving one quart a day to my calves, two quarts to heifers, and three to my cows. I have been looking over your back volumes to try to find the information, but *cannot;* and there is such a diversity of opinion here, that I thought I would like to have yours, which I have always supposed first authority in all such matters. A. W. Parsons. [Analysis shows that cobs contain some nutriment, but the amount is quite small. The question whether to use them, should be answered somewhat according to circumstances. When ground, after cracking, by a common grist mill, many hard lumps remain unpulverized, and these are hurtful to horses, but may be of no detriment to cattle. If ground in this way, the meal should therefore be sifted, if for horses. We find, however, that the new farm-mills, like Joice's Star Mill, Scott's, or Young America, if in good running order, will tear the cob into such minute fragments as to obviate this objection. But when these facilities are not at hand, but little loss will be sustained if the cobs are entirely rejected, and only used for kindling-wood.]

Keeping Fruit.—Would it not be well to give on one sheet, the results of experience *in keeping* different kinds of fruit—little details wanting, result in an entire failure. I have just opened a box of grapes put up with layers of cotton, and not one fit to eat. J. H. [We intend, on a future occasion, to furnish some facts on the subject; and in the meantime would be glad to secure the results of experiments from those who have been uniformly successful, as well as those who have failed. The mode of packing should, however, be given at the same time, as well as condition of the fruit, character of the treatment, &c. Our correspondent may have failed because his grapes were not well grown and well ripened, indispensable requisites; or from a damp apartment, too warm a temperature, or all these combined. Unless grapes are thoroughly cultivated and freely pruned, they never ripen well enough to keep long.

Shares' Harrow.—Would you advise a man to purchase Shares' coulter harrow, as a useful farm implement? My land is a stiff clay. I have not a cent to spare or speculate on, yet I am willing to do anything that will assist in thoroughly refining and pulverising the soil, as I think that in itself is equal to half manuring, and if so, please say what may be the cost, when dropped at the Chatham station, C. W. [We think our correspondent will run little risk of loss by purchasing Shares' harrow, if he has a farm of average size or over. For pulverizing the surface of newly inverted sod, either for planting corn or other crops, we know of nothing that will compare with it, as it cuts up and mellows the surface more than twice as deep as the common harrow, and does not and cannot tear up the sod. It is also said to be excellent for covering sown grain, but on this point we cannot speak from our own experience. The only disadvantage we have found, is that the teeth are not quite strong enough for the rough usage they sometimes get from hired men—but which care would obviate. We find the timber work heavy enough. The cost is $15 at Albany, and a dollar or two would be charged to carry it to Chatham station, C. W.]

Milk Weeds.—Can you tell me how to destroy this pest of the lawn and meadow? I have an annual crop in a lawn, which it is not desirable to plow and cultivate for two or three years, if it can be avoided; yet I find that the plant rather *enjoys* being pulled up twice in a season. How shall I kill it? E. [To destroy any weed, like the milk-weed, which extends beneath the surface by creeping stems or roots, *it must not be allowed to breathe.* Cut every plant as far below the surface as possible, the first moment the tip of its stalk appears, by means of a chisel set on the end of a spade handle—unless the soil is so loose as to allow pulling to bring up a longer portion. Watch constantly for a few months, and keep them all below ground, and they will die. But if the care is intermitted they will soon renew themselves, and the war may be interminable.]

Laying out Drains.—J. T. H. has sent us a plan of his grounds, for directions how to lay out ditches for draining it. There are two important points of information not given, which are requisite to enable us to furnish these directions— The first is the size or dimensions of the land, that we may know the number and distance of the drains. The second is the degree of descent or slope—the number of feet of fall in a hundred, both of the swamps and upland, as nearly as can be determined by a common leveling instrument. He wishes his inquiries answered in the Cultivator for February—but, as is often the case, the inquiry came after that number had gone to press.

Salt for Cattle.—Can you inform me if some salt is not indispensable to the health of cattle, given with their food? W B [It is the common opinion that a portion of salt with their food contributes to the health and thrift of animals.— But the experiment can never be tried, whether they would do well entirely deprived of it,—for all vegetables have more or less of it. For example, a ton of barley straw contains 4 lbs. of salt; a ton of green white clover, 2 lbs.; a ton of carrots, 4 lbs., and a ton of beets 15 lbs., according to chemical analysis. How much more ought to be added to this portion, for the best health of animals, we cannot tell.]

Chinese Sugar Cane for Cattle.—What are the properties of the Chinese sugar cane as a substitute for hay, to be fed to horses, and would you recommend it in preference to common millet; and if so, how should it be given, what its culture and process of saving? M. [We have never used the Chinese sugar cane to any extent, for horse feed. We have no doubt it would answer well in winter, provided it could be cut very short by a horse-power cutter, say not longer than a sixth of an inch. This would remove that hard woody character which the stalks possess when kept till winter. We have found cows to eat it well when cut somewhat longer; and in autumn, before it becomes dry, it is eaten in the stalks by them with great avidity. We should, however, prefer cutting it for horses, even at this time of the year. To raise the sugar cane, it should be grown in drills three feet apart, by plowing furrows at this distance, strewing the seed along at the rate of thirty to a foot, and covering with a harrow, run lengthwise. Cultivate it two or three times—it will not require hoeing. The product will be several times greater than that of meadow. Put it in large shocks, where, as it is stiff and tall, it will keep well till wanted.]

Liming Land.—I should like to be referred to some work containing the best treatise as to the quantity, time and mode of application of lime as a fertilizer; and whether it is best applied in the caustic or slaked condition. A. W. McDonald, Jr. [Our correspondent will find good practical directions in Stephens' Book of the Farm, for the English practice, and in Allen's American Farm Book, for American practice. He will also find much on the subject in Browne's Field Book of manures, a good compilation on the subject of manures generally.]

To Butter-Makers.—Can some one of your numerous readers inform me through the Cultivator, the best way to keep butter in rolls during the hot summer months. L.

Floors for Cattle Stalls.—Will you do me the favor to inform me as to the best mode of constructing floors in cattle stalls. My stable is to be 62 feet long, and 30 feet wide, with a passage of 6 feet running the length of the house for the convenience of feeding. The stalls are arranged on each side, the animals standing with their heads to the center and entering through a door in the outside wall. There is no communication between the stalls, each animal entering her own stall through this outer door. I wish a floor that can be easily kept clean, and one that will drain off the urine. It is intended principally for cows, though I may need a few stalls for bulls and steers. Please tell me how I can arrange it to drain the urine into the manure heap or some better place, without too much cost. I wish, also, the floor of the whole building rat proof if possible. R. W. H. *Moorefield, Ky.* [The best floor, perhaps, is made of hard-burnt brick set on end. If well laid, this floor is smooth, easily cleaned, and will last indefinitely. Neatly laid paving stone do well, but need more litter to make a soft bed. Some good farmers prefer hard beaten earth for the floor on which the fore feet stand, on which the animals may kneel on lying down and rising, and to be well covered with straw to make it comfortable. The hinder portion is to be paved with brick, stone or with thick solid flagging. A gutter may be made behind the stalls to carry off liquids, but the bottom should be flat, and wide enough to receive a square shovel for cleaning it daily. This gutter is best made of flagging, or of wood; but unless the wood is of some durable sort, it will soon decay.]

Kidney Bean.—Will you inform me through the Co. Gent., if the Kidney Bean is a pole bean or not, and where can they be had for seed. E. J. P. *Orleans, Co, N. Y.* [The name Kidney Bean includes all the varieties of the *Phaseolus vulgaris*, or common garden bean, including both the bush and running varieties. The seed may be had at all the principal seed stores. The *Vicia Faba*, or English garden or horse bean, is totally distinct, and of no value in this country.]

Grapes for Vermont.—Please inform me which are the best sorts of hardy grapes for Vermont—say half dozen sorts. S. Dillingham. [Delaware, Diana, Hartford Prolific, Northern Muscadine, Concord, Rebecca.]

Corn Shellers.—Do you know of a corn-sheller constructed with a hopper, so that the ears can be poured in promiscuously and will feed itself? J. Randall. [All common cornshellers, worked by hand, receive the ears one by one, on end—but there is a large one driven by horse power, into which the ears are emptied by the bushel, and which can be had at most agricultural warehouses.].

Langstroth's Bee-Hive.—*P. P. P.* The purchase of Mr. Langstroth's book, does not, we presume, give any one the right to use his patented hive. What the charge for the right to use it is, we are not informed.

The Kicking Colt.—In answer to your correspondent who asks for the best method to break a colt of kicking while being cleaned, I would say, according to my experience, the most easy and effectual way is to bend one of the forelegs and slip a loop over it, so that he cannot get it down—after the Rarey plan. While in that position it will be impossible for the colt to kick, and he will at once submit to be cleaned. Also, if a colt is reluctant—as is often the case—to have his hind legs handled, or his crupper adjusted, this mode of treatment will be found effectual This method may also be applied with success to kicking cows. S. *Fayetteville, N. Y.*

Urine as Manure.—Will you please tell me how to best use the urine of, say about 300 workmen, on a farm I own of about 50 acres? If used as a top-dressing, how much must it be diluted? If it will interest you or your readers, I will give you the method I employ to obtain so much urine. A Regular Reader and Subscriber. [If used as a liquid manure, it should, while fresh, be diluted with at least its own bulk of water, for two reasons; first, that it may not prove injurious by being too concentrated; and secondly, the water retains a large portion of ammonia and prevents its escape during the fermentation of a few weeks, which should always take place before it is applied. If intended for compost, many substances may be used for absorbing it and giving it a solid form, such as *dry* peat, *dry* loam or turf, sawdust, straw, coal ashes, and charcoal. If any of these substances are moist, they will absorb but little, and retain less. The amount mentioned would probably be a sufficient application for ten to twenty acres, if preserved and used in the best manner. Please send us the method alluded to.]

Farm Record.—In the first No. of the present vol. of the "Co Gent.," I see a notice of a blank book, ("The Comprehensive Farm Record,") gotten up by Dr. F. B. Hough of Albany, which was expected to be issued about this time. How will we find out the price, &c? D. S. *Pennsville, Pa.* [The book will, we presume, be advertised in this paper, with price, &c., as soon as ready, which will, we understand, be early in March.]

[For the Country Gentleman and Cultivator.]

SOILING CATTLE.

EDITORS OF THE COUNTRY GENTLEMAN—I am always glad to see this subject discussed in the Agricultural papers, for I think it of great importance to a large number of the farming community. And as I have kept my stock under this system, for the last four years, with your permission, will give the result of my experience and my method of doing it. If what I shall say, will throw any light upon the subject, or benefit any one, I shall feel rewarded for the effort.

I have a farm of fifty acres, all tillable land, except about three-fourths of an acre around my barn—rather stony—this is fenced off for my stock to run in, during the summer. In this lot there is an unfailing spring of water, sufficient for fifty head of cattle, at all seasons of the year. My stock is small—have usually kept six cows, two yearlings, and raised two calves yearly, but intend to increase the number of cows. I also have a span of horses—they are kept on cut hay and meal, until spring's work is done, and then put upon the green diet.

The crops raised for soiling purposes, are rye, corn, sorghum, millet (have raised three varieties, think the Hungarian best,) and clover—though last season clover was entirely killed out, and I was compelled to use Timothy and red-top. My stock kept well on this—clover, however, is preferable, as it yields a larger amount of feed, and may be cut two or three times during the season. Corn, I consider the best of the other crops named, but for the sake of variety, would raise them all.

The mode I pursue is this: In the fall I sow about an acre of rye, pretty thick—then in the spring, as soon as the weather and ground will permit, I put in a piece of corn, sorghum and millet, and at intervals of about two weeks, put in more of the same, until about the middle of July. In this way I secure a succession, and a variety of fresh, succulent feed—just the thing for making milk and butter. I also raise roots to some extent, and think them valuable to feed in the spring to milch cows. The sugar beet and carrots succeed best with me; turnips are generally a failure, from the ravages of the fly. Pumpkins are excellent to feed in the fall, to keep up the flow of milk.

In pursuing this system, it is necessary to fodder a little later in the spring, as neither rye or grass are sufficiently large to cut, as early as pastures will do to turn into. I feed hay and roots, with a little meal or shorts, until the rye, sown in the fall, is about a foot high—then commence feeding from it—moderately at first, so as not to make the change from dry to green food, too rapid, and increase the quantity, as it increases in size, and the cattle become accustomed to it. In a few days, clover will do to cut—when it is from four to six inches high, if it stands pretty thick—and is fed in addition to the rye. I continue to feed hay until well into June. Cattle will eat a little hay once or twice a day, and relish it, when kept on green feed, whether soiled or pastured. By the time the rye is disposed of, clover has attained sufficient size to furnish all the feed required. As soon as the other crops are large enough, I feed from them once a day—changing from one to the other, often—cattle like a change of diet—making clover the principle feed as long as it continues fresh and good. The other crops are to furnish a variety, and to meet any contingency that may arise from drouth, or otherwise, and for fall feeding.

The next thing in order, is the cutting of the feed and care of the stock. Clover should be cut when fresh—in the early part of the day, or just before night. Morning is the best time, but not until after the dew is off; for if cut and handled when wet, it is not as well eaten by cattle, and I think is not as good for them. My way is to cut in the morning, sufficient to last until the next morning, and draw it in immediately, so that it shall wilt as little as possible, and place it in a long narrow pile in front of the manger—it is then convenient for feeding out, and will keep fresh until used up. Saturdays, I cut in the morning, and again at night—the last cutting to be fed the next day. It is important that sufficient feed be provided at night, for foddering in the morning—cattle are early risers, and want their breakfast as soon as up, and should not be compelled to wait for it. Foddering should be done the *first thing* in the morning, and should be repeated *two or three times*, so that by eight o'clock, they have had all they require. They may now be turned into the yard until noon; when they should again be stabled, and fed sufficient to *fill themselves;* so also again at night. A full supply of pure water, is of course, necessary. *Regularity* as to the *time* of foddering, is important, and should be varied from as little as possible. It is better to feed in the stable—the labor is more easily performed, and then each one gets his share—the weak are not molested by the strong. The trouble of tying up is very little, and the amount of *manure* saved, is *very considerable*. I am particular to keep my cattle well bedded with straw, and this, with a little carding, keeps them perfectly clean. Every two or three days, a boy with a wheelbarrow and shovel, passes over the yard and gathers up all the droppings, and deposits them on the manure heap, thus saving all or nearly all of the manure.

In the fall, after my crops are all secured, I give my cattle the run of the farm, except a few acres around the house. They are fed with a little corn or millet in the morning, and again at night; by feeding them a little night and morning, they are not as hungry when turned out, and I think do not feed the meadows as close during the fall; consequently injure them less. I stable them nights the year round, and always milk in the stable—not one of my cows was ever milked out of doors—think it the best plan, as they are then all quiet, and in rainy weather all is snug and dry; they are carded every day, except in the busy part of the year; much might be said in favor of this practice.

And now, Messrs. Editors, in conclusion let me say, that from the little experience I have had in soiling cattle, I am decidedly in favor of the system—especially for milch cows—and should like to have said a few words in regard to some of its advantages; but as I have already occupied too much space in your valuable paper, will forbear. Light is needed upon this subject, and I hope those who have had experience in the matter, will "let their light shine," through the columns of the Country Gentleman.

Jefferson Co., N. Y. J. L. R.

Butter from Six Cows.

MESSRS. EDS.—I would like to give you a statement of our butter-making the past year, (from Jan. 1st to Dec. 31st, 1859,) not that I have the vanity to believe that it cannot be beat, but chiefly as the result of soiling. My cows, six in number, are the native breed, medium size, and their ages as follows:—1 two, 1 three, 1 four, 2 six, and 1 ten years old; all raised by myself. They were dry from six weeks to two months previous to calving.

During the winter they were fed once a day on cut straw, wet, with two quarts of barley meal and shorts mixed with it. I also fed forty bushels of roots to the six cows and three yearlings during the winter. The balance of their food was good hay, and all they would eat. In the summer they were kept on green corn, sorghum, millet and grass, cut and fed to them in the stable. The oldest cow proved not to be with calf, and in the fall I fatted her—she was not milked after the 28th of Sept. On the 6th of Dec. a heifer, 20 months and 25 days old, dropped her calf, (too young by 4 months,) and I have estimated the two (the heifer and the cow fatted) as occupying ten months of the year—or say five cows for one year, and one cow for ten months, One quart of milk was daily kept by itself for ordinary family use; when more was wanted it was used.

Now for the butter. We have made thirteen hundred and seventy-two pounds and five ounces, or a fraction less than 235¼ pounds to the cow. The butter was disposed of weekly at 25 cents a pound, except that used in our own family.

Watertown, N. Y. J. L. R.

WHEAT CROP OF ORLEANS CO.—The annual report of this county Ag. Society, states the last wheat crop as an excellent one, and remarks—"one reason for the large yield was, the wheat was sown on the best soils, well prepared and tended, and sown earlier than heretofore."

THE CULTIVATOR.

ALBANY, N. Y., MARCH, 1860.

The Pennsylvania Farmers' High School.—

> We learn that the State Farm School is in a highly prosperous condition. It is now applying its one year's practical experience in combining labor and study, to the farther systematising the details. We understand that its means of illustration have been largely increased for next session by the extensive collections brought from Europe by the President of the institution, Dr. Pugh, and by his practical acquaintance with the systems of the European schools, as well as by other contributions and purchases, and by the general growth and vigor of the institution. We doubt not that all this will be received by the people of Pennsylvania with high satisfaction, under the assurance, from the train of progress apparent, that this nursery of intelligent farmers, on which our hopes of future agricultural position and success must largely depend, will realize the expectations of its originators, its best friends everywhere, as well as the community in general.—Germantown Telegraph.

We have been intending for several weeks to notice the catalogue of this Institution—lately received, and affording gratifying evidence of earnest efforts on the part of its Trustees toward the accomplishment of the hopes expressed above.

The pamphlet in question opens with some remarks—from the pen of the President of the School, we presume—in explanation of the system of instruction to be pursued, and arguing at considerable length the importance of greater intelligence in the pursuit of Agriculture, to the further development of that science, not less than to the practical interests of the agricultural community. Dr. Pugh, we infer, would answer the question, "why are so many of our young men leaving the farm?" partly, at least, by reasoning that as their interest is awakening in mental effort, and the ambition is arising among them for mental attainment, there has been no guide to point them into any real and practicable path to Agricultural Science—no institution to train them so that the transition from its preparatory studies to the duties of the farm at home, would be only a change like that of the engineer and surveyor from the study of mathematical principles to the practical duties of the field. In other words we take it that his aim is to secure a kind of education that shall lead the student to higher scientific and general acquirements, particularly in those branches associated with Farming, without giving him a distaste for the manual exertion which this pursuit necessitates—to provide him with a sort of knowledge capable of detecting quackery, and of testing the improvements that genuine Science may suggest—one that should quicken and govern his own experiments and investigations, and place within his better apprehension those that have been already made in the past, or are elsewhere in progress now.

Other subjects besides that of Agricultural Education are far more easily dealt with upon paper than they are in practice; but we shall look for something beyond mere generalities, of which all our agricultural literature possesses rather a superfluity, in the present instance. If foreign experience in treating the problem is worth anything to us here, Dr. Pugh has had the opportunity of studying it quite as thoroughly as any American we know, while his "antecedents" and personal tastes, so far as we are acquainted with them, are of such a kind as to render the opportunities he has enjoyed, of double value. We do not, therefore, wish to convict him as altogether guilty of our national sin of "spreading the American eagle"—when he writes, in conclusion, that "*all the civilized world* is watching the issue" of his present experiment; "the civilized world" is conducted on a pretty large scale now-a-days, and yet the farmers—with whose condition we claim that all civilization is most intimately connected—form, perhaps, a large enough part of it to justify the assertion, provided those of their number whose lot has been ordered by Providence within the boundaries of the "Key Stone State," encourage, as they should, the labors now going forward for their benefit. And those of New-York, whose anticipations are beginning to be aroused by the prospect of witnessing at an early day a similar institution of their own in active operation, will not be less pleased to see their Pennsylvania brethren setting them an example of cheerful support, and pointing them to the way in which their sons may reap the most good from a course of mental discipline "peculiarly adapted to the necessities and calling of the Farmer."

Who Says Farming is not Profitable?—From a statement in the Southern Cultivator, "by Prof. I. N. Loomis"—it is not stated whether he is a pseudo, or a real professor—it appears that there is a farmer in New-Jersey who went there twelve years ago, pennyless—that he bought 19 acres of land, "as barren and unproductive as most of the worn-out old fields of Georgia"—that he has since increased his farm to 120 acres, erected a "splendid mansion, besides elegant and commodious out-houses, and improved and ornamented his place to the highest degree of beauty and refined taste," and that he "owns besides between $50,000 and $75,000 worth of other property,"—and all this has been realized from that small farm, of which even now "only 33 acres are under cultivation," the remainder being in meadow, pasture, lowland and wood." Who will hereafter dare to say that farming is not a profitable business!

A Practical Compliment.—We should hesitate about publishing the following extract, if the kind opinion of this paper which the writer expresses, had not been backed by a list of twenty subscribers for it—a practical evidence of sincerity and appreciation which we could scarcely ignore, however much we might be disposed to accept in silence the words of encouragement with which it is accompanied:—

> Massachusetts.—Franklin County, Jan. 28.—"It is a pleasure to me to assist in the circulation of The Country Gentleman, and to know of its prosperity; it is certainly the first agricultural paper in this country. I think, let me say, that the letters of "L. H. T.," for a travelers' letters written currente curriculo, are very remarkable productions, and should by all means be preserved, as I presume they will be, in a volume form. Permit me to say if he does so, that correct cuts of animals, implements or buildings, very much enhance the interest, and as a friend of yours, and of the science and of books, let me insist upon a very full index—to make it valuable as a reference—such a style of index as you put to the Co. Gent. for example. J. S. G."

Maine State Ag. Society.—The annual meeting of this Society, as we learn from the Maine Farmer, for the choice of officers, was held on the 25th ult., and the following persons were elected officers of the Society for the current year:—

President—W. C. Hammatt of Howland.
Secretary—E. Holmes of Winthrop.
Treasurer—W. T. Johnson of Augusta.
Trustees—J. F. Anderson, Calvin Chamberlain, Seward Dill, T. M. Bradbury.

Thomas S. Lang, former President, was unanimously re-elected, but declined on account of pressure of other business.

North-Western Ag. Society.—An incorporated association, under this title, has been organized at Chicago, with the following officers:

President—John A. Kennicott.
Secretary—F. W. Reilly.
Treasurer—E. I. Tinkham.
Directors—Dr. John A. Kennicott, Hon. W. B. Eagan, Henry Fuller, W. R. Loomis, Wm. L. Church, Isaac Cook, E. I. Tinkham.

Its object is explained as follows:

> The objects of this Society are the promotion, protection and encouragement of Agriculture and its kindred arts and sciences; the assertion of the importance of a fitting recognition of this great primary interest, so closely allied to the success not only of Chicago, but of our whole country; the erection of an Agricultural Bureau at Washington; the founding of an Agricultural College, Museum, Library and Reading Room in Chicago; the establishment of Annual Fairs and Exhibitions, and the improvement of a permanent Park, Pleasure and Fair Grounds.

Its capital is fixed at $60,000, of which $22,000 has already been subscribed, and they have purchased the "Garden City Race Course" grounds, containing 52¼ acres, for $28,000.

The Great Haxtun Steer.—The great bullock raised and fatted by Elnathan Haxtun, of Beekman, Duchess Co., was killed and dressed at Patterson's slaughter house on First Avenue, New-York, on the 19th of Jan., and after hanging just a week, his meat was weighed. His live weight when first taken to the city, as weighed upon the Washington Drove-Yard scales, was 3452 lbs. Three days afterwards, weighed upon the same scales, by the same man, with scales carefully balanced, he weighed 3418 pounds.

Afterward, upon two other scales, he weighed 3419 pounds. The dead weight is for fore quarters—1st, 700 pounds; 2d, 668 pounds—1368. The hind quarters—1st, 482; 2d, 469 pounds—951. Total 2319 pounds. The net weight is not quite 69 pounds per 100 upon his last live weight.

THE N. Y. STATE FAIR FOR 1860.—As our readers will learn from the Report of Proceedings at the Annual Meeting of the State Ag. Society, published in another column, ELMIRA was recommended as the place of holding the next Fair, and the Executive Committee, at their session on Friday, after adopting this recommendation—conditionally upon compliance with the usual requirements, of which the fullest assurances were given,—decided upon October 2, 3, 4 and 5 as the time of the Exhibition.

AN AGRICULTURAL BUREAU.—There have been a number of rumors in circulation in regard to new Agricultural arrangements under the Government at Washington, which we have not hitherto noticed—preferring to wait until the announcement should come in official shape. As we have been given to understand, Col. B. P. JOHNSON, of the State Agricultural Society, received an informal invitation to take in charge the Superintendence of a new Agricultural Bureau, to be separated from the Patent Office and placed under the immediate supervision of the Secretary of the Interior. Conceiving, however, that his present position afforded opportunities of agricultural usefulness, quite as great as the sphere that would be opened at Washington, he declined entertaining any more direct proposition; and at a social meeting of the U. S. Ag. Society, during their late session at that city, the Secretary of the Interior, after referring to these facts, mentioned that he should probably carry out the design of a separate Bureau as indicated, and place at its head, Hon. T. G. Clemson (of Virginia, we think.) The *Washington Constitution* of the 7th, states that Mr. C. the previous day, entered upon his preliminary duties "as the future Superintendent of the Agricultural Division, with instructions to report at once to the Commissioner, in order that he may be enabled to familiarize himself with the affairs involved in its operations, and receive the records and other effects pertaining thereto. The gentlemen employed in this branch of the service are also required to report to Mr. Clemson for duty, and to be directed by him, under the authority of the Commissioner of Patents, until such time as the proposed transfer shall be consummated, when the management will devolve exclusively upon the Superintendent, under the immediate direction of the Secretary of the Interior." We have no knowledge as to what may or may not be Mr. Clemson's qualifications for this position, but there appears to be a very general sentiment of hope that whatever a govermental desk can accomplish for the benefit of our agriculture, will at last be fairly tested before the country—a hope which we trust may be crowned with fruition under the new incumbent, although at the same time so fully impressed with the difficulties of the position, that we shall by no means look forward to any sudden and immediate millenium for our farmers.

KENTUCKY.—Extract of a letter from a subscriber in Mason County:—"I will try and send you some more names. A paper so good as the COUNTRY GENTLEMAN, should have a larger circulation in this, the very best agricultural region in America. "Big talk," say you—but it is so. I have seen all the best parts of America, Great Britain and France, and say no such natural soil exists elsewhere. Richer than any other in mineral and vegetable constituents, self-drained, quick and warm, it has no equal. Fifty years continual cropping in grain, *tires* our land; but all that the owner has to do is to put it down to grass from five to seven years—use it for grazing during the term, and his land is stronger, and *and grows heavier crops than the virgin soil ever did.* The true theory is, fifty years cropping robs the surface of the necessary mineral and vegetable ingredients. Seven years rest gives nature time to elaborate anew the exhausted minerals; the grass renews the vegetable matter, and the Kentucky landed proprietor has a perfectly renewed soil, capable of sustaining another long course of grain crops. This simple operation is his *guano* and his *compost heap.* He needs no other."

NEW BOOK FOR FARMERS.—C. M. Saxton, Barker & Co., Ag. Book Publishers, New-York, we are pleased to learn, have a new work in press from the pen of our correspondent, Mr. S. EDWARDS TODD, of Tompkins county. It is called "The Young Farmer's Manual," and coming as it does from the pen of a successful practical farmer—one "to the manor born"—we cannot doubt but that it will prove a valuable addition to every farmer's library.

☞ It gives us much pleasure to announce that EDWARD G. FAILE, Esq., of New-York, who has been one of the most active and efficient Vice Presidents of the State Agricultural Society for several years past, was last week chosen a member of the Board of Trustees of the State Agricultural College at Ovid.

SOAKING SEEDS BEFORE SOWING.—This practice is not as extensively adopted in this country as it might be with advantage both for the farm and the garden. In this respect we are far behind a people whom we are apt to regard with feelings nearly approaching to contempt. There are few, probably, either in England or this country, who are are not disposed to think themselves much superior to the Chinese, and yet, in one respect at least, we think they are much in advance of most farmers in either England or America. LIEBIG states, in his "Letters on Modern Agriculture," that no Chinese farmer sows a seed before it has been soaked in liquid manure diluted with water, and has begun to germinate; and that experience has taught him that this operation tends not only to promote the more rapid and vigorous growth and development of the plant, but also to protect the seed from the ravages of worms and insects.

There would be not only some trouble but some inconveniences also in the adoption of this practice on an extensive scale; but we are pretty confident, notwithstanding, that those who commence it on a small scale, will find it productive of advantage enough to induce them to extend their operations. We may suggest that we have, on more than one occasion, been informed by one of our correspondents that he makes much use of hen manure in water as a soak for his seeds.

VERMONT STATE AG. SOCIETY.—At a meeting of the Executive Board at Brattleboro, on the 1st inst., it was decided to hold the next annual Fair of the Vt. State Ag. Society at Burlington, commencing 2d Tuesday of Sept. and continuing four days.

☞ The next session of the American Pomological Society, as we learn by a letter from the President, Hon. M. P. WILDER, is to be held at Philadelphia, commencing Sept. 10.

A LITTER OF PIGS.—Mr. HIRAM OLMSTED of Delaware county, hands us the following figures. A litter of nine pigs was farrowed May 14, 1858, the property of E. WAKEMAN, and were sold to the following neighbors of his and killed at the following dates—showing an average weight of 456 lbs. each at the average age of between 17 and 18 months.

Date.	Owner when killed.		Nett weight.
Nov. 20, 1859,	S. M. Bartlett, 2 pigs	weighing,	780 lbs.
Dec. 10, do.	N. Nichols, 1 pig	do.	410 do.
15, do.	A. Nichols, 1 pig	do.	422 do.
Nov. 15, do.	D. Beers, 2 pigs	do.	800 do.
Dec. 20, do.	E. Wakeman, 1 pig	do.	552 do.
Oct. 20, do.	N. Wakeman, 1 pig	do.	405 do.
Feb. 1, 1860,	do. do.	do.	742 do.
	Total nett weight of the litter,		4,111 do.

These pigs were full blood "natives"—the *live weight* of the last and heaviest being plump 900 lbs.

ST. LAWRENCE CO. AG. SOCIETY.—At the annual meeting, Jan. 10, the following officers were elected:

President—Hon. CALVIN T. HULBURD, Brasher.
Vice Presidents—Joseph Whitney, Madrid; George A. Sheldon, Hermon; Reuben Nott, Oswegatchie; Joseph E. Orvis, Massena; Charles N. Conkey, Canton; Alexander J. Dike, Depeyster; Nelson Doolittle, Russell; Joseph E. Durphey, Hopkinton.
Secretary—L. E. B. Winslow, Canton.
Treasurer—George C. Bogue, Canton.

The report of the Treasurer, stating the receipts of the year past to have been $2,604.51, and the disbursements to have been $2,576.75, was read and adopted. A resolution was adopted that the premiums of the Society should be "open for competition to the world." It was determined that the future Fairs of the Society should open on the last Wednesday of September.

Mr. Wainwright's Next Devon Sale.—From our Advertising columns it will be seen that a portion of the excellent Devon herd at "The Meadows" is to be offered at public sale the coming season. It had been Mr. W.'s intention to make these sales *biennial;* but not having a sufficient number of animals to offer publicly last year, he disposed of such as he could best spare at private sale. We need scarcely say that the superior quality of anything offered by Mr. W. is entirely to be depended upon. The bulls with one exception, will all be under two years old. Nor is it necessary to add that it will be a *bona fide* sale: it may be remembered that Mr. W.'s last sale was carried out in exact accordance with the stipulations in the catalogue, although at a heavy loss to himself.

Apple Crop of Niagara Co.—About two hundred thousand barrels of apples have been sent from Niagara Co. to points east, north, and west, the past season. Putting the average price at $1.50, would make the value of the exports $300,000. Large quantities were also marketed for domestic use, and a still larger amount dried for marketing, so that we may safely estimate the value of the crop of 1859 at $500,000. A large share of these apples were the largest and fairest ever grown in the county.

Manuring and Draining.—I have read the Junior's Letters from Europe with a great deal of interest and profit, and must tell him that he appears to have worked hard and plowed deep. But has he discovered the *self-sustaining system of farming for America?* Liebig would have us believe that this consists in returning the mineral ingredients only, whilst John Johnston preaches and practices the return chiefly of the organic ingredients. One thing I am certain of, Liebig and Johnston may manure all they can, but a thoroughly drained subsoil must underlie the soil that yields a *full profitable* return in the shape of grain crops of all kinds. This Johnston preaches and practices, and in this he is far ahead of any one in this country, and fully equal to his compeers in Europe.

The amount of ignorance in this country, as to true farming, is extraordinary. This may be accounted for by the fact that the early settlers found the soil fertile and generous, and they practiced a system of constant and successive cropping, without stopping to think of the result. Their children followed the example set before them until they found that crops failed, and then they began to look around for a cause. Barley has ceased to be grown in this county, because the land won't grow it, but many farmers do not know the cause (or won't.) They ascribe its failure to unpropitious seasons, insects, defect in seed, &c., &c. One of my neighbors sowed one field to oats seventeen years in succession! And when he wanted to sell the land, he cited this fact to prove the richness of the soil! But there is beginning a change here, and this I ascribe to the good effects produced by the agricultural press. You are not laboring in vain—depend upon it. J. R. C.

Shares' Harrow—Sinclair's Straw Cutter.—If you are not overrun with recommendations of Shares' Harrow, I would like to give it a most hearty approval, but to dissent from the suggestions of some of your correspondents that it should be made heavier. My soil is a light loam, and my teams are large, strong, and well fed, but the harrow gives them enough to do as it is. Another implement I bought this year, that was advertised in your columns, has given great satisfaction—Sinclair's Straw Cutter and Cornstalk Masticator. It is a very well made, strong and effective machine—and the only one I have ever seen that did work enough to make it pay. Two horses can go on the horse-power and cut all the hay in one hour, that they will eat in a week. The only trouble is to find a man smart enough to feed it. T. L. Harison. *St. Lawrence Co.*

Remedy for Vermin on Cattle.—C. H. M. asks for something to kill lice on cattle. Rubbing them over with hog's lard will do it, but unguentum I think cheaper—a little put on the neck and shoulders, and a little on the rump, will generally kill them all in a day or two. If it don't, apply a little more. If C. H. M. will look around, he will find some cause for his well fed calves having lice on them. Not having air enough in their stables will make them lousy, no matter how much good feed he gives them. Dirty beds will also do it. Standing in muddy yards will also do it, especially in wet clay; it creates a fever in the feet and legs; the hair all over them is rough, and in the end they fail in condition and become lousy. I had one cattle yard to tile-drain, to prevent the cattle treading up the clay when the weather was soft in November. When they trod up the clay, their legs became swollen, their feet sore, their coats staring, and lice followed. I had to put them in a dry place, foment their legs with warm water, rub the legs and feet dry, and then rub on a salve of sugar of lead and lard, and a few days got them well; but some 15 years ago I made the yard perfectly dry, and never had a case of the kind since.

Look and think, Mr. C. H. M., and you will find a local cause for lousy well fed animals—a sharp eye and *thinking*, is very important for the stock master—I think more so than any other branch of farming. John Johntson.

Near Geneva, 27th Jan., 1860.

P. S.—I wish some of those gentlemen who think sheep must have ticks on them, would come and examine mine.

Comstock's Terraculture.—

> It is frequently said in some of the agricultural periodicals that a report was made some years since by a committee of the New-York State Agricultural Society, unfavorable to the alleged discovery of Mr. Russell Comstock. This is entirely founded on misconception—an innocent misconception, without doubt, but one which ought to be corrected.—[N. Y. Eve. Post.

In reply to the above, we copy the following paragraph from the Transactions of the N. Y. S. Ag. Society, vol. 10, p. 133:—

> Mr. Allen or Erie, in the absence of the chairman of the committee, to whom was referred the claimed discoveries of Russell Comstock of Dutchess Co., on vegetation, reported, after a conference with Mr. Comstock, that the committee came to the unanimous opinion that no *new discovery* had been made by Mr. Comstock, nor was his practice *different from that of experienced nurserymen heretofore*, and which may be found described in public works—and although important in themselves, the committee do not deem it proper for the Society to recommend to the Legislature any appropriation to Mr. Comstock as the discoverer. The report was accepted and adopted.

New-Hampshire State Ag. Society.—At the recent annual meeting of this Society, the following officers were elected:

President—Wm. F. Estes of Dover.
Secretary—Aaron Young of Dover.
Treasurer—Frederick Smith of Manchester.
Board of Directors—Dana Woodman of New-Hampton; Joseph B. Walker of Concord; Alfred Hoit of Durham; John Preston of New-Ipswich, and John S. Walker of Claremont.

Large Hogs.—Thomas Hood, living about four miles east of Crosswicks, killed Feb. 5th, 34 hogs—average weight 560 lbs. The largest weighed 720 lbs. Isaac Harrison killed 21—averaged 514 lbs. The largest weighing 657 lbs. William Taylor killed 37—averaged 475—largest weighing 578 lbs. They were fatted principally upon ground corn scalded. G. R. Duer.

Burlington Co., N. J.

Large Sheep.—I send you the weight of a lot of sheep bred and fed by me. There were 30, viz., 12 ewes that I selected from my flock that I did not care to breed from, and 18 two-year old wethers. They had not been extra fed; they had a little oats and corn once a day part of last winter, and until grass. I gave them no grain afterwards until the grass began to fail, which was about the middle of November. I then gave them grain again until they went to market, which was the 19th Dec., 1859. I weighed a few of them at home. The heaviest weather weighed 257 pounds—the heaviest ewe 245 pounds. They were driven to the village, and the average weight of the whole of them there was 206 pounds. They were a cross of the Leicester and Cotswold. Hugh Exton.

Union Farm, N. J.

Straw as Manure.—Wheat straw, estimated by the value of its constituents, is worth for the purpose of feeding, from 30s. to 35s. ($6 to $7) per ton. We would therefore prefer chopping it up, enriching it with a little mucilage of linseed cake, and feeding our cattle with it to using it for bedding horses or cattle.

HIGHLAND NURSERIES, Newburgh, N. Y.

A. SAUL, (successor to the late A. J. Downing

& Co.,) has the pleasure of announcing to the patrons of this old establishment, and the public in general, that his stock of

Fruit and Ornamental Trees, Plants, &c.,

for sale for the ensuing spring trade, is full and complete, and comprises everything to be obtained in his line of business, viz:

A large stock of Apple, Pear, Cherry, Plum, Peach, Apricot, Nectarine and Quince trees, 1 to 3 years from the bud, of superior quality and growth. Grapevines, native and foreign, embracing all the new and rare varieties. Gooseberries, Currants, Raspberries, Blackberries and Strawberries, of all the new and old proved varieties. Rhubarb and Asparagus roots do.

ORNAMENTAL TREES.

EVERGREENS.—A large stock of Norway Spruce of all sizes, Balsam Fir, European Silver Fir, Austrian, Scotch and White Pines, Hemlock and American Spruce, Arbor Vitæ, Junipers, (in varieties,) and a great variety of new and rare Conifers from 1 to 5 feet high.

DECIDUOUS TREES of extra size, for street planting, and giving immediate effect to Parks, Lawns, Cemeteries, &c., &c., such as Maples, 8 varieties; Elms, 10 varieties; Ash, 8 varieties; Oaks, 6 varieties; Catalpas, Horse Chestnuts, Ailanthus, Larch, Tulip (true,) Abele, Negundo, Mountain Ash, Deciduous Cypress, Weeping Willows, Lindens, &c., &c.

FLOWERING SHRUBS.—Over 50 choice species and varieties.

ROSES.—A large collection of Hybrid Perpetual, hardy Garden and Moss, China and Tea, &c.

HEDGE PLANTS.—100,000 Osage Orange plants of extra growth, 1 to 3 years old.

The above stock is all of the best quality and growth, and will be sold on the most reasonable terms.

A new Catalogue will be ready about the middle of March, and will be sent to all applicants enclosing a P. O. Stamp to prepay the same.

A. SAUL, Highland Nurseries,
Mar 1—m2t | Mar 15-weow4t Newburgh, N. Y.

"WONDERFUL!"

THE "TELEGRAPH CHURN,"

which makes the best Butter in the world in Two Minutes, and which was pronounced the best on exhibition at the Winter Meeting of the N. Y. State Ag. Society on the 9th of this month. Price $7, and large enough for eight cows. A boy 10 years old can work it. For sale by

W. W. EGGLESTON,
Mar 1—w4tm1t Albany, N. Y.

Extract from the Catalogue of Messrs. E. G. Henderson & Son, the Queen's Nurserymen, London, 1859.

THE LAWTON BLACKBERRY.—

"Numerous testimonials of public bodies and professional growers, have been produced in favor of its being a distinct and good habited plant, without a single defect in its growth or bearing—the fruit of delicious flavor, admirably adapted either for a dessert fruit, market produce, or for family consumption in home-made wine. The fruit is produced in large terminal racemes; the individual aggregate berries are large, like to small conglomerated miniature clusters of black grapes, and with seeds proportionately small to each berry."

Thus in all parts of the world is this fruit becoming favorably known and a volume of testimonials could be given equally favorable. The original variety may be had of the undersigned, in small and large packages. Feb. 23—w&m1t. WM. LAWTON, New Rochelle, N. Y.

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Farmers and Dealers will find it to their advantage to give us a call before purchasing their

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Price,—1 bbl. $2—2 bbls. $3.50—5 bbls. $8, and over 6 bbls. $1.50 per barrel, delivered free of cartage to vessel or railroad in New-York City.

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Feb. 2—w1t&Mar. 1—w1t. Lockport, N. Y.

NOTICE.—The Copartnership heretofore existing under the firm of A. SAUL & CO., having expired by its own limitation, the undersigned will continue the business on his own account from this date. A. SAUL.
Highland Nurseries, Newburgh, April 1st, 1859. Mar 1—w&m1t

Now Ready—Single Copies sent by mail, post-paid, for Twenty-five Cents—One Dozen Copies, post-paid, for Two Dollars. Agents Wanted.

THE ILLUSTRATED ANNUAL REGISTER

Of Rural Affairs for 1860.

The Sixth Number of this work is now ready, and presents features of no less attractiveness and value than its predecessors. The following abstract of its contents, together with the fact that they are Illustrated by no less than One Hundred and Seventy-eight Engravings, will afford better evidence of this than anything the Publishers can say.

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  2. Various Modes of Grouping.
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  2. Training and Pruning for first Four Years.

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  1. Post Fences, Modes of Construction and Setting
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  2. Hanging the Gate.
  3. Constructing and Hinging it.

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  4. Stalls for Horses—Four different forms.
  5. Stalls for Cattle—Means of Tying.
  6. Cattle and Sheep Racks.

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  2. Plowing and Subsoiling.
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  4. Implements for Surface Tillage.

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  3. Joice's Star Mill.
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  2. Transplanting Small Trees.
  3. Apples for Market.
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  5. Ripening Pears—Sorts for Market—Hardy varieties.
  6. Select List of the Newer Pears—Dwarfs.
  7. Plums—The Blackberry—Strawberries—Grapes—Insects on the Apple.
  8. Sending Grafts by Mail—Root Grafting.

X. SUPPLEMENTARY LIST OF NURSERIES.

XI. RURAL MISCELLANY—Twelve Engravings.
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  2. Dairy Economy—Winter Butter—Damp Stables—Wintering and Stabling—Fodder, &c.
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  7. Wool Table.
  8. Cleaning Seed Wheat.
  9. To Make Farming Profitable.
  10. Packing Trees for Transportation.

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Jan. 1, 1860 Albany, N. Y.

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STEEL PLOWS.—We are manufacturing for the spring trade large numbers of our Mohawk Valley Clipper Plows with steel mold-board and land-side, with steel or cast point, as desired, and would refer you to the following persons, who have them in use:

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We are also manufacturing Sayre's Patent Horse Hoe and Potato Covering Machine, Sayre's Patent Cultivator Teeth in quantities for the trade; and all kinds of steel and swage work in the agricultural line. Send for a circular. SAYRE & REMINGTON.
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Red Antwerp, Fastolff, Knevitt's Giant and Allen Raspberries, at $1 per dozen—$5 per hundred, or $40 per thousand—or the sett, ONE DOZEN OF EACH OF THE FIVE VARIETIES, will be carefully packed and forwarded on receipt of $4 by mail.

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☞ FAVORABLE TERMS TO AGENTS. ☜

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Jan. 1, 1860. Albany, N. Y.

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Feb. 16—w2t West Cornwall, Conn.

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THIRD] TO IMPROVE THE SOIL AND THE MIND. [SERIES.

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"THE COUNTRY GENTLEMAN," a weekly Agricultural Journal of 16 quarto pages, making two vols. yearly of 416 pages, at $2.00 per year, is issued by the same publishers.

Editorial Notes Abroad.

No. XXIX—A Day in the County of Essex.

Visit at Mr. JOHN CLAYDON'S—the Short Horns—the Land and Cost of Draining it—Wages—Importance of an "Air Drain"—the Stock kept and Manure purchased—What an English Farmer knows—a Ride into the Park at Audley End—Farming in Essex county.

There is a line of the "Eastern Counties" railway that pierces the heart of Essex—carrying one through Chelmsford, the county town, and Colchester, a place three times as large, (famous, to judge from the guide books, equally for its ruins and its oysters,) away into Suffolk, where we have just been wandering and noting, and so on into sandy, four-course Norfolk. But there is another line, turning northwardly from this, just after we are well away from Bishopsgate, and coquetting in succession with the skirts of Middlesex, Essex and Hertfordshire, as no reasonable railway with due regard for the traveler's geographical impressions would probably do—undoubtedly encouraged in this course, however, by the river Lea, in the valley of which, and bridging it every now and then as we proceed, our route will run for near a score of miles—passing, too, as it would be most negligent in any tourist not to add, somewhere to the right of Edmonton, and, later, through the junction of a branch to Ware.[*] Ground over which, it is true, these letters have before carried us hurriedly; having then in view the roses of Sawbridgeworth, and, upon the day following, the festival within the borders of Cambridgeshire among the South Downs of Babraham.

After which, as at that time specified, it was a pleasant evening drive back into the corner of Essex, to enjoy the kindly proffered attentions of JOHN CLAYDON, Esq., who cultivates two farms, embracing about 1,800 acres, in the vicinity of Saffron-Walden. I had met Mr. C. as a judge at the Suffolk Show, and his active service in such a sphere of duty was not inconsistent, I soon perceived, with the energetic and thorough management of an agricultural establishment so extensive, together with the indulgence practically of a natural taste for well-bred and highly improved stock.

The next morning we looked first among the Short Horns, finding several that would have graced any show yard—particularly, I remember, "Duke Humphrey," as a rich red fifteen months-old bull is called—the only one in England, beside Webb's "Earl Derby," sired by "2d Grand Duke" before his trans-atlantic emigration—also a heifer, who was half sister to that distinguished personage, and a number of charming calves, the progeny of Mr. Webb's "Earl Hardwick," and apparently justifying all the compliments I paid their parent when writing immediately after having mentally daguerreotyped his merits.

Mr. Claydon's land is partially a stiff clay soil, but it varies widely, and embraces some that is quite gravelly. There were nearly 300 acres under wheat; about 520 in barley and oats, chiefly the former; 300 in roots, mostly in Swede turnips, as mangolds appear not to succeed quite so well above a chalky substratum; 100 in grass, (probably permanent pasture,) and 70 in woodland. Upon the clay a six course rotation is advantageously employed, as for example, 1, fallow for turnips or mangolds; 2, barley; 3, clover or sometimes beans; 4, wheat; 5, beans, and 6, wheat a second time, followed as above by roots. The 800 acre farm, as I understood, belonged to Mr. Claydon himself, while the other was rented. The former had been wholly drained, and the latter to a considerable extent, at a cost of from £3 10*s.* to £5 per acre. The general depth he has preferred is 3 feet, but on soils of a gravelly kind he goes to any depth necessary to tap the springs—sometimes as much as 7 feet. We stopped to see the tile works,[†] and I was told that the pipe in ordinary use were sold here for 24*s.*, (say $6 per 1,000,) and that the workmen who make them are paid 8*s.* (say $2) per 1,000 for the labor involved, fuel being furnished. Various patterns of tile for other purposes, and of brick, were also manufactured at the same place.

The regular weekly wages of labor here were 9*s.* and beer, that is 1*s.* 6*d.* (about 37 cents) per day, but men in charge of teams receive 11*s.* per week, and good workmen in the busy season can earn much more by the job. I should not, however, have diverged from the subject of draining, without adding that Mr. Claydon's experience on *heavy clay* leads him to estimate very highly the importance of having an air drain, as it is sometimes called, at the head of a field—that is, a line of tile connecting the upper ends of the lateral drains, and open, probably at both its own ends, for the admission of the air. He thought the circulation thus promoted through the whole system of underground channels, of most efficient assistance in very stiff land to the proper exercise of their functions, supplying, in some degree, the place of the abundant pores in an open and gravelly soil, in admitting greater atmospheric pressure upon the contents of the drains—thus facilitating their more speedy passage outward—and, perhaps, also of service at other times in maintaining air currents, which it is not impossible might create a downward draft as it were, and increase by degrees the porousness of the superincumbent soil. However fairly or unfairly I may represent from memory the theory by which he explained the benefit resulting from such a head drain, this reference to the subject should stand mainly upon the merits of the experience involved, which, as I have said, was stated to be decidedly in its favor.

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[*] EDMONTON and WARE—see the melancholy narrative of JOHN GILPIN, as chronicled by William Cowper, a most veracious author of the last century.

[†] It may have been here, instead of at Mr. Crisp's, as mentioned in a recent letter, that I saw the process of making "pan tile."

Among the stock on the place there are the Short Horns, intended as the foundation of a select herd, then including 12 or 14 head—6 of the cows in calf to three of Webb's best bulls—and all, as intimated above, forming really a choice and promising beginning. Then come some of the nicest improved Essex pigs I anywhere met with, breeding sows to the number of 18 or 20; and last, and probably as yet the most important of the three, a flock of about 570 breeeding ewes and 600 lambs. Beside, however, there are annually fattened about 100 bullocks, and 30 to 40 head of young stock are generally wintered, while from 800 to 1,000 sheep are fed for the butcher according to the success of the turnip crop. To keep these animals the farm would yield 400 quarters, or thereabouts, (eight bushels per quarter) of beans; 70 to 80 tons of oil-cake would be purchased at from £9 per ton to £12 sometimes for the best home-made, while the growth of the roots would require 50 tons of "blood manure" or superphosphates, applied at the rate of 3 cwt. per acre, at a cost of 8*s.* per cwt. If the feeding of animals, according to Mr. Claydon's experience, can be made to pay for the oil-cake and the attendence they require, all the turnips, hay, straw, &c., will be willingly "thrown in" by the farmer—reckoned in other words, as so much paid out for the manure they produce. It is a rather extraordinary stroke of good luck, as I understood it, if purchases and sales of feeding stock can be made to do anything more than this—say, for instance, to return to the feeder 2*d* per bushel for his turnips. One source of fertilizing material, to which we have already several times alluded, is largely made use of by Mr. C., namely, burnt sods and clay—the ashes being prepared at a cost of 5*d.* for 20 bushels, and employed mainly, I think, upon root crops.

The rent paid for land here is about $7.50 per acre without tithes, or $6.50 where also subject to a tithe of about $1.25.

Few pleasanter and more useful days did I spend than that at the "Rectory Farm," and I am sorry that my notes prove so meagre, and my memory so treacherous as to all that might be narrated of what we said and did. Moreover I had hoped to procure from Mr. Claydon some memoranda as to the cost of the production of the crops he raises, of feeding stock, etc., etc., to which end I must here confess to having propounded perhaps more questions than even an American would generally consider it admissible to ask. To tell the truth, however, it seemed to me one of the most important illustrations I could furnish of "English Agriculture"—aside from any intrinsic value of the facts themselves—to show, if possible, how well and accurately the best English farmers know *just what they are doing*—that is, not only whether this or that particular branch of the year's affairs is to return a gain or not, but also the general features of the Agriculture of their district, and the details of every part of it in which they are themselves intimately concerned. It will be remembered, in looking over the approximative statements often given in these notes, that I, and not my informants, am responsible frequently for any lack of precise exactness they exhibit; for inquiries made as they occur to the mind in a stroll through the fields, in driving from farm to farm, or otherwise, cannot of course be answered as they would be in the library, with the farm-map and books at hand for reference. I saw enough of my host in the present case too, to learn that an eighteen-hundred acre farm is no child's play to manage, even in England, and if perchance he still remembers my long string of interrogatories, I can only express the wish that he might find in the above considerations as great excuse for their having been made, as I can in the pressure of his engagements for their never having been answered in detail.

Particularly I wish I might carry the reader with me on our ride that beautiful 8th of July—pausing here to inspect a heap of calcined clay in red clods and powder, or cutting across the headland of one field to visit the crops in another; spying out the insects (if any there were) in the tall, stiff beans blackening over for the harvest; following the scarifier up and down to examine its operation; passing by the cottager's garden, famous for its berries; stooping under the tile sheds and thrusting our sticks into the soft clay ready for moulding; making a flying call upon a nice bit of horse flesh, and stirring up a litter or two of chubby pigs; and last, and most of all, of the noble park at Audley End, with its grand old beeches, and their broad and welcome circumference of shade; the troop of fallow deer that clustered under them, with little fear of treacherous dealings from the human forms more familiar to them there as kindly admirers than as foes—two hundred and fifty or three hundred in number, watching us like coy youngsters from a village school, and giving an effect to the sylvan scenery about and the verdant turf beneath, which we Americans find far more often in pictures than in reality. However much I might fancy, nevertheless, that my forte lay in descriptive effort, and however well memory may recall a general outline, any landscape to be depicted in presentable form, requires more aid than memory alone can give the painter; he must have sketched this or that effect of blended light and shade as they strike him at the moment, if he would attain to such a touch of Nature as Nature herself alone can give. It has been said, I think, that if there is any subject upon which one's manhood is peculiarly sensitive, the world over, it is that of equestrian accomplishments; and without even pretending to present a modest under-estimate of those which I possess, (mainly acquired, I think, by some familiarity with the fine engravings of Suffolks and Clydesdales presented during the past twenty-five years in the *Farmer's Magazine*,) it is no disparagement of them, I trust, to add that my head would have been more clear for appreciative observation if my feet had been in some position more familiar to them than the stirrups. As a previous foot-note has contained an allusion to one instance of not altogether masterly horsemanship embalmed in legendary rhyme, it is, however, needless, to pursue the theme farther at this time.

The view commanded in some parts of the park is considered an unusually fine one, and the mansion of Lord Braybrooke, the proprietor, is an extensive and lordly residence as one sees it from the public road, the walls being sunken on either side, so that the prospect from it may include an uninterrupted range of woodland scenery. We also drove into Saffron Walden, a place of five or six thousand people, and containing an interesting museum and a fine church.

The county of Essex, toward the eastern part of which we had already visited Mr. Mechi's noted estate, is a district of not quite 950,000 acres, long in cultivation, including near the Thames much marshy grass land, and in the vicinity of towns numerous gardens and farms devoted to the production of seed and similar purposes. Well watered and generally of a somewhat heavy loam, it furnishes London with excellent wheat, while according to Arthur Young and Loudon, its arable lands are "cultivated better than nine in ten of the other counties." "With every facility," says Mr. Caird, "which railways, roads and navigable rivers can supply for the disposal of produce and fetching back manure, this county might be expected to be eminently well cultivated, the landlords wealthy, the farmers prosperous, and the laborers fully employed." But, writing in April, 1850, he represents this as "far from being the case." Certainly Mr. Mechi does not present a very attractive picture of the methods in vogue when he began at Tiptree Hall, in that part of the county, but it is possible that a more favorable one might be drawn of the northwestern district, partaking as it may more of the character of southern Cambridgeshire; for, from what I saw in that region, and what I have heard of the farming of such men as Mr. Webb and his landlord, Mr. Adeane, Mr. Jonas—formerly of Ickleton, and now, I believe, of Chrishall Grange, not far from Saffron Walden—Mr. Claydon, and others, I should find it difficult to believe that there is not here some of the most thorough and sensible cultivation which the kingdom affords. The Adeane estates are said to include 300 acres, irrigated ever since the days of Queen Elizabeth, and something of the kind has been carried on upon a smaller scale at Audley End.

GAS TAR FOR TREES.

Editors Country Gentleman—The Michigan Farmer of Feb. 11 says: "J. W. M. of Amsterdam, N. Y., writes substantially that an application of coal or gas tar has destroyed his trees. I have, in pursuance of the recommendations of several horticultural journals, applied it *literally* to the whole of an orchard of about sixty acres of apples, containing over 2,000 trees, and several hundred other fruit trees, including peach, pear, plum and cherry. They are all in fine condition, and thus far show no signs of injury. The bark beneath the tar is fresh and green. The tar was applied from about one inch below the surface to 18 inches above.

I write you from an impression that I shall be as likely to obtain either directly from you or from sources to which you can recommend me, the earliest and most reliable information as to what I should do.

The property periled by this experiment, if endangered, amounts to many thousands of dollars, and that I feel great solicitude you may well conceive.

You cannot scrape the tar from the tree without removing wholly the *outer* bark. This I have tried.

If the coating will *not* injure, it is certainly a complete protection from what here are great pests, *mice and rabbits.*

Detroit, Feb., 1860. H. H. Emmons.

We have never tried gas tar nor seen it tried in the way mentioned; but have heard of disastrous results from its use. From a want of experience we can only speak by way of suggestion.

The trees will probably remain uninjured till the hot sun of spring acts upon them. If the tar were applied freshly at that time, we think it would destroy them, by the combined action of the great heat of the black surface, and the melted tar running into the pores. There is a possibility that the tar may become so well dried by that time, as to obviate the latter objection. If on the thick bark of old trees, applied in winter, the danger would be comparatively slight. On young trees, freshly applied in warm weather, death would be nearly certain. There would be various grades of intermediate danger as the circumstances might vary. If the trees are mostly young, we should prefer to get rid of the tar. Ashes and water or soapsuds, will remove it soon after it is applied. Probably turpentine would at a later period; but the turpentine itself is dangerous unless quickly washed off by the assistance of the ashes or soap. On old trees, with the tar dried in winter, and the coated part shaded with straw, we should not apprehend much danger. Such experiments should of course be always tried on a small scale. We regret we can do no more at present than offer uncertain suggestions—we hope some of our readers may give the results of their experience.

Chestnuts and Walnuts from Seed.

I should like to ask how long it takes to grow chestnuts from the "seed;" also "English walnuts." Would the seed planted in spring, vegetate sooner if the shells were partially or wholly removed? At what age do they bear fruit? Would they bear sooner if grafted on their own roots, or is there any other stock that would be better? F. B.

Chestnuts will grow the following spring after they ripen. They usually fail to vegetate because the shell is allowed to become dry. The moment they drop from the tree, they should be mixed with or buried in moist peat, sand or loam, and kept in this moderately moist state till planted. If left upon the ground, as soon as they fall, and covered and kept moist with leaves or straw, they would readily grow the next spring, if the mice did not get them. Nearly the same treatment is applicable to the black walnut, except the nut does not dry so soon as that of the chestnut. Probably the walnut would grow more readily if the shell were removed about the time it sprouts. It might wilt, decay, or spoil, if done much sooner. We know of no advantage in causing early bearing by grafting, unless such trees were selected to graft from as have borne unusually soon. Nor is there any other stock to recommend.

THE BLACK KNOT.

I should be glad to know if you or any one else can give a remedy for the unsightly and destructive black fungus coming on the limbs of nearly all our plum trees. S.

A remedy of twenty years trial has kept our own trees clear, if promptly and repeatedly applied. It is to cut off every diseased part as soon as it makes its appearance. Never mind if this cutting does disfigure the tree—it is better to do so than to have it disfigured with black-knot and death. Some say they have tried this mode and failed—but we have ascertained on inquiry that the disease in such cases had been allowed to nearly ruin the tree before any effort was made to arrest its progress. A man might as well talk of insuring his house against fire after it is in ashes; or propose to send for the doctor after the patient is buried. Others complain of the "trouble"—but it is no more trouble than cultivating the soil. Those who expect to have fine fruit without "trouble," will have to wait a long time for it. "In the sweat of thy face shalt thou eat good plums." We have found that washing the wounds made by these excisions with a solution of chloride of lime, lessened the tendency of fungus to break out again.

Farm Improvement—II. Drainage, Manure, Etc.

Farm Improvement with "the many" a Gradual Work—Underdraining, and the Change it Works on Hard and Sterile Soils—Saving and Applying Manure the Basis of Progressive Farming—The Corn-field should be Thoroughly Manured—What to Plow, and Why Keep Stock—Mr. Quincy's Remarks—Show Them that "It Pays," and Agriculture will Become Popular.

Among the works of improvement in which the farmer may profitably engage, we have already instanced the subdivision of the farm with an idea to its symmetrical arrangement for the most convenient, effective and economical management. This we have said, after the plan is once fully formed, may be a gradual work—"one field at a time, and thorough work with it," and such progress will best suit the means of the majority of farmers. We have little sympathy with those who will do nothing because they cannot do a great deal—who make no progress because they cannot go rapidly forward—and less still with those capitalists engaged in agriculture, who scorn the work of the farmer of moderate means, because it does not equal their own well-puffed achievements. It is our aim to induce the *many* to begin, and to point out a practical way of doing so; well knowing that the work once fairly commenced, will go on without our urging.

Let us return then to the field and farm instanced in our former article. It may be that more or less underdraining is needed in order to profitable cultivation. This first field may require a few drains in the clayey corner, or down the slope, (which we take in here because it cannot find a better place in other fields,) to render it equal to the remainder—and to make it one of the best lots on the farm. Let us not leave this improvement unattended to. Its results will reward us for many years with largely increased productiveness. It will be taken from the list of hazardous and uncertain, and be placed among those surely productive—no longer demanding a peculiar season and culture in order to the remuneration of the labor bestowed upon it. Almost every farm has fields of this character—fields sure for good culture to return good crops, very extraordinary seasons and casualties excepted—and almost every farmer has those which fail frequently, however much labor may be bestowed, because the season does not suit them. And the grand difference in soil, character and certainty, lies in the fact that one is porous and friable from drainage, natural or artificial, while the other is hard and sterile from the presence of or effects of stagnant water in soil—the remedy for which is found in this simple operation. We have so frequently urged considerations bearing upon this point, that we will not continue them in the present connection.

An equally important question to be considered by those anxious for farm improvement, is this, "Do I avail myself of every means within my reach to increase the amount of manure made and applied upon the farm? Do I give care and labor to this subject, commensurate with its importance in furthering the ends proposed?" If so, the ground and basis of farm improvement is laid. If not, the matter must receive greater attention, for we may rest assured that a reasonable amount of labor in this department will be well rewarded, and cannot be withheld without great prejudice to our advancement.

The greater the amount of manure we can apply in any year, the larger our fields may be. But it is far better to grow large crops on a few acres, than to grow small crops on many acres. To return to the first crop, heretofore proposed, we would repeat that no farmer should plant more land to corn than he can thoroughly enrich with manure. It will then be fit for any following crop. No farmer should plow up any portion of his farm unless he can prepare it for growing good crops by manuring and culture. Every farmer should keep stock, that he may be able to grow grain, and he should grow grain that he may be able to feed stock and make manure. If we avail ourselves of every fertilizer within our reach—if we make our fields accord with our manure, enriching each of them thoroughly in its turn—we shall soon be able to give every crop, and the whole farm, that preparation and culture which shall ensure its productiveness and certain profit.

Speaking on the question, "What will tend to make agriculture pleasant and profitable as a pursuit?" recently discussed at the Boston State-House, the Hon. Josiah Quincy, Jr., made some remarks very pertinent to the subject before us. He said (as reported in the N. E. Farmer) that he thought the great question in relation to agriculture was, "Will it pay?" and our present purpose should be to show that it will. He spoke of farming in England and France, where men invested very large amounts of capital in cultivating small farms, thus making it very profitable, and getting the most from the land, while here our farmers are too desirous of extending their labors over too much territory, and not half cultivating any of it. The report, (to quote it directly,) adds further:

> "He said that there was nothing that paid better than money judiciously expended on the soil, and in proof of this he spoke of pet pieces of ground that yielded at the rate of $50 to the acre, and he asked why this might not be extended to 100 acres? He had 10 acres of ground on which the hay was not worth cutting; finding this, he broke it up, fertilized it, barrowed and seeded it, at an expense of $50 per acre, and the first year he got 2½ tons of hay from it, which he could sell at the barn for $20 per ton, thus paying in one year for the entire expense. He had last year raised 300 tons of hay, which cost him $700, which he harvested for $2.50 per acre, while his neighbor could not do it for $5; but the speaker said he had the advantage of the best machines, mowing, raking, &c., and it is in not having these that farmers lose money. He thought farmers were the most extravagant men in the world, and he showed this by their neglect in saving manure. Mr. Quincy then showed that a cow kept up during the year, will produce more value in manure than the value of her milk, relying on the estimate of Dr. Samuel L. Dana, that she produces (when composted with two parts muck,) 21 cords. He alluded to the care which is taken in Europe in this matter, and spoke of the result in bountiful harvests.
>
> The great element of farming, said he, is saving, with a liberal and judicious expenditure, and we must either invest more capital, or reduce the area of our farms to make the land yield what it will do, and it would be far better if farmers invested their profit in their land than in bank or railroad stocks."

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[For the Country Gentleman and Cultivator.]

FROSTED CORN.

Observing in divers publications, instances of farmers having plowed up large fields of Indian corn, owing to the frosts of last June, I am induced to give my experience upon the subject. About the year 1849, I had a small field of corn cut down *twice* by frost, that made good corn *without* replanting; and this was my guide for last year, when I planted a field of 35 acres, Ohio river bottom, very flat, with basins here and there of half an acre each. When the frost came, this corn was eight to ten inches high, and on the following day the plants looked as though hot water had been poured on them, especially in the basins. *I did not replant*, and notwithstanding the excessive drouth and great neglect sustained by my hands leaving at wheat harvest, I have just now finished harvesting about 2,500 bushels good sound, thoroughly matured corn.

A Kentucky Farmer.

[For the Cultivator and Country Gentleman.]

LARGE HEAVY PORK.

Burlington county, New-Jersey, has become somewhat noted for some of its crops of *extra heavy* pork, which are annually made by some of its farmers, and sold in the Philadelphia, New-York and other markets. Some of these hogs are of extra size, or rather they are made extra large by being extra *fat*, so that their individual weight much exceeds what we formerly used to kill. This is owing chiefly to good and careful feeding, though those farmers who make pork such an object, are careful to select the best stock for breeding, from our old common stock of hogs, and they have been crossed and recrossed, and we know of no name to specify them by; yet we think them superior to any other kind we know of, in point of fact for the grand object of making superior pork, as the result proves—that being the best test after all is said and done.

Our farmers generally like their pigs to come in April and May, when the sows can have a good flow of pasture in addition to some little feed. After harvest, they all run in the grain stubble awhile, soon after which they receive a little additional help in their feed to keep them in good thrift. The pigs are selected for keeping over; and the others, and also those one year old, are fed on the soft corn—then on better corn, and finally on the best corn in the grain and on corn-meal—more or less of each, according to the *varied* preferences of each feeder—generally raw, though some scald the meal with hot water, and let it swell from after one feeding time to the next, and then again the same—this more especially at latter part of feeding. They are mostly killed in January, though a few are kept till first of February.

After long high feeding, they become very dainty of grain that has the least improper taint, and require much care not to "cloy" them.

I have been at some pains to collect an account of the weight of some crops of pork, and of a part of other crops, and herewith send them for publication:

The following is the nett weight of 32 of the hogs which were raised, fatted and killed by Thomas Hood:

720—680—625—624—617—610—592—585—576—570—569—565—563—562—561—560—552—545—542—542—541—539—538—532—531—529—527—520—520—513—511—504.

It will be seen that one weighed over 700 lbs.—that six weighed each over 600 lbs.—that fourteen averaged over 600 lbs. each—that the lightest one of the whole 32 weighed over 500 lbs.—that the whole 32 averaged 563 lbs., all round.

Thos. Hood also killed other hogs, which were fine and well fed. They were killed about the first of February, 1860. Last year (1859) he killed 41 hogs, which averaged nett 532 lbs.; and in 1858 he killed 44 hogs, which averaged 548 lbs. All these hogs, and those yet to follow, hung on the gallows over two nights to dry and thoroughly cool, and then were carted to the railroad depot, and then and there weighed, as sold. They would have weighed more if weighed the day they were killed and dressed.

The following is the weight of 22 hogs, raised, fatted and killed by Isaac Harrison, which however are not as large this year as formerly. I have not the last year's weights. He also killed a lot of "pigs," some of which run from 175 to 300 lbs. nett:

649—626—606—590—587—557—539—510—510—505—502—493—491—483—466—458—435—427—426—421—419—408.

It will be seen that of this crop, three hogs weighed over 600 lbs. each, and the whole 22 averaged 504 lbs. all round.

Wm. Taylor killed 34 hogs, which averaged 475 lbs., the heaviest weighing 570 lbs. nett.

Thos. Emly killed 33 hogs, averaging 460 lbs.

Edward Jamison killed 53 hogs, of which 24 averaged 430 lbs.

The following is the weight of 52 hogs, after being dressed ready for market, and weighed the same day—fatted and killed by Elwood Haines:

474—468—452—430—430—429—425—423—419—417—416—416—412—409—408—402—398—397—393—392—389—388—385—385—384—384—384—384—383—382—382—380—380—375—375—371—370—368—368—366—362—360—358—350—345—345—344—344—332—330—330—325.

It will be seen that of the foregoing, 16 hogs weighed each one over 400 lbs., and that 40 head of them average about 400 lbs., and the whole lot averages 386 lbs.

There were many other excellent crops of pork killed in this county worthy of notice; but I have not the weights of them, and send such as I have. WATSON NEWBOLD.

Burlington Co., N. J.

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MOLE PLOW FOR DRAINING.

If you think it worth while, I should like to get some information from you as to Col. Dickinson's mode of draining, with a conical piece of iron fixed at the bottom of a thin, sharp coulter. You say nothing about it in the Register. Now here, where land is worth only from $30 to $35 an acre, and where draining would probably cost a like sum, it seems to me hardly possible that it could pay; and yet our land though high and rolling, needs draining. Wheat and clover heave out and winter kill frequently, and the soil gets soddened by the spring rains. We have for the most part a yellow clay subsoil; soil varying from a clay loam to a sandy loam. There are a good many boulders on and below the surface, presenting serious obstacles to subsoiling or draining. Would they make draining by horse-power impracticable? How are we to prevent the bottom of a drain partaking of the inequalities of the surface? How are we to manage about main drains, outlets to lateral drains, &c.? How much team does this draining plow require? In short, is this kind of draining suitable to our circumstances? J. W. SULIOT.

Summit Co., O.

Col. Dickinson's draining plow is essentially the old English mole plow, which is described briefly and figured on p. 78 of Thomas' "Farm Implements." It can be only used in a subsoil nearly or entirely free from stone. Large stone would at once arrest its progress. It could not of course be used in the subsoil described. The friction of the coulter and plug are enormous. Hence, to cut deep enough for permanent value, say 2½ feet deep, it has to be moved by the use of a windlass, fixed by strong iron anchors, as represented in the book above referred to. It must be used either on a smooth, descending surface, or else the course for a constant descent must be previously staked out for the machine to follow. We know of no person who manufactures this plow for sale—there are not many places sufficiently clear of stone to use it. It is not so much used as formerly, now that tile is generally employed. The "draining plow," for loosening the earth for shovelling out, has greatly reduced the expense of cutting ditches, where its use is understood.]

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[For the Country Gentleman and Cultivator.]

REMEDY FOR THE CUT-WORM.

The most thorough mode of destroying the cut-worm, is to fatten hogs in the truck patch or garden, after the crops are taken off in fall or winter. They destroy the larvæ.

A KENTUCKY FARMER.

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TO MAKE COWS TAKE THE BULL.—I have two cows, calved first Dec., in very fair condition, which as yet show no symptoms of bulling. The bull runs with them. I am anxious they should be with calf as soon as possible. Some say by giving salt three or four times a week, would bring them in. Please say what might be done, and you will oblige J. M. *Morpeth, C. W.* [We are assured by those who have made the trial, that by giving the cow a piece of rennet as large as the palm of the hand, thrusting it down her throat, she will take bull within 24 hours, invariably.]

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WINTER PLOWING.—"Whenever the ground is dry enough, and the frost out, says the Ohio Farmer, begin plowing. It often happens that our springs are so wet that plowing cannot be performed until late. If performed during the fall and winter, much time and even a crop may be had, that otherwise would not be got *in*, in proper season."

Agriculture—Its Standing and its Needs.

How Agriculture stands in public opinion, and what it needs to place it in a proper point of view, are questions worthy of frequent and careful consideration. Though a subject we have before spoken upon, yet deeming it worthy of occasional recall, we would take it up now and here.

The life and employment of a farmer has never lacked its eulogists; indeed, it has been praised and lauded from classic days until now, beyond all other occupations which men follow for a subsistence. The members of most other active business callings, seem to look upon Agriculture as a pursuit rich in varied charms and ample rewards; and often picture to themselves a farmers' life, as free from the cares which now vex them, and sigh for an exemption from the anxieties of their present business, and the enjoyment of the elysium of a farm of their own in some pleasant rural neighborhood. Mr. Sparrowgrass has many counterparts in real life—men who have a kind of poetized idea of farming, very different from the experience of the practical agriculturist, and who little dream of going earnestly to work themselves, or of depending on the products of their own labor for support, as he must do; but they have made money in other occupations, and now propose to themselves a leisurely enjoyment of agricultural felicity. What the result often proves, we need not repeat.

Another class—men who have had one sort of experience in the matter—look with very different eyes upon the pursuit of Agriculture. We have met such,—and they have formerly been well described in this journal, as men who have toiled for long and weary years, always working hard, and yet who are now very little in advance of their starting point—what has been gained, is the result more of *saving* than of *making*. What they possess they owe to the closest economy and ceaseless hard work. The farm has been to them a scene of much toil and a source of little profit. To make "both ends meet" has taxed every energy, and when anything more has been done, it has ever seemed at the expense of some much-needed comfort and convenience. Meaning well, and anxious to thrive, they have ever found it an up-hill business, and we wonder not that they are ready to decry the idea of making a good or easy living by the culture of the soil.

Others—practical farmers, also—take a more encouraging, and it seems to us, a more reasonable view of farming, and the requisites to success therein. They look upon agriculture as the basis and substratum of all other avocations of men, as "fuel that feeds them all—that gives power to the great locomotive of human achievement." With this high idea of its importance, they do not content themselves to follow the old routine whether successful or unsuccessful; they see the advances and improvements made in every thing around them, and instead of sinking back satisfied that no progress can be made, no more profitable course pursued, no waste prevented, no neglected crop, product, or fertilizer turned to profitable account, they apply all their energies, mental as well as physical, to the development of the resources of their farms, and the means at command about them. These men do not come to you with the tale of "all work and no profit" on their lips. They not only save but *make* money, and they do it fairly and honestly, by creating, as it were, out of the soil, new and valuable products. There need be no paltry shifts and meannesses in such a life, like those for which most avocations furnish too many often-urged excuses.

What, then, is the true standing of Agriculture? Is farming pleasant as a pursuit, honorable as a profession, and profitable in result, or the contrary? The answer depends upon the man and the circumstances. There are certain requisites to success which may not be foregone—enterprise, intelligence and capital, as well as industry, are required in this as in all other pursuits. There is ample room for the exercise and employment of all these, for it has been well said, "Agriculture in its true sense is an Encyclopedia in itself—requiring great knowledge, fine powers of observation, high mental cultivation, assiduous thought and study, and opening its arms to ingenuity and invention." He who enters with enthusiastic relish into the business will find it pleasant—if he understands and appreciates its demands upon him. Its respectability and dignity, few now question, and there would be little room to do so, would every farmer show himself a workman, and not a bungler in his profession. Of its profit there will ever be varied opinions, as men may find it in their own experience—but it will be found that comparatively more men arrive at competence in life through agriculture than through any other avocation. Hence we conclude—and reaffirm the conclusion—that with the requisites to success in this or in other pursuits,—intelligence, capital, enterprise, industry—agriculture will prove as profitable, as honorable, and far pleasanter, as a life-long employment, than any other which may be chosen. This seems to us the true state of the case.

The great need, to render Agriculture more uniformly successful, is the increase and diffusion of agricultural information and its thorough practical application. The spirit now awakened must extend its influences until we have many more thorough farmers who exemplify the best modes of culture and management, and show by their farms, their crops, their stock, and their general success, the most direct way of making a living, and a good one, by the culture and products of the soil. Such examples are annually increasing, and are of incalculable influence upon the prosperity of the country, and it is an influence which will never cease to act for good. Our scientific men and schools must also join in the work. Agricultural papers should be circulated more widely, and read more carefully—indeed we can scarcely limit the power they may exert in showing the many how the few succeed, and as a means of spreading the experiments, and inquiries and suggestions of the thousands of minds anxious to elevate farming above its present position—ready to devote all their energies to the achievement of an honest success. It is our highest ambition to do all in our power for the progress of this greatest material interest of our country and of mankind.

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[For the Country Gentleman and Cultivator.]

FARMING ON A SMALL FARM.

MESSRS. EDITORS—In giving some of the reasons for, and advantages of, commencing farming on a small scale by young men of limited means, my object is not to prevent or discourage them from laboring on other men's farms, at a salary for a limited time; say long enough to accumulate a few hundred dollars, with which to buy a small farm of from fifteen to twenty acres, but rather to encourage them to do so. And also to so manage and calculate their work, when farming on a small place, as to keep it ahead, and thus get time to work out by the day, when work is driving and wages good; as in planting and hoeing, haying and harvesting, &c.

The great aversion to manual labor, in my opinion, means aversion to laboring for others, or working out; and that one of the principal causes of this aversion is the opinion, that at the present price of land, it must take a young man a very long time if he ever accumulates money enough to buy a farm. Once satisfy him, that by a few years labor on a farm, by the month or year, he may save enough out of his earnings to buy a small place, and that by good management, and industry, and economy, he can make enough in a few years to add more land to his little farm, or be able to sell and buy a larger one; and that by pursuing this system of operation, he may finally become the owner of a good farm—I say, once satisfy a young man that this may be done, and a large portion of the aversion to working on a farm will be removed.

What drives thousands of young men into other business, is the idea that they cant do anything at farming without a farm of some size, say from fifty to one hundred acres; which it will cost several thousand dollars to purchase and stock with suitable teams, tools, &c., and that it will be very difficult, if not impossible, for them ever to compass the means of getting such a farm. Hence they reason, that for them to undertake to earn the money to buy a farm by working out, would be very likely to end in being hirelings all their days. And they find no difficulty in pointing out plenty of examples, to sustain this kind of reasoning. To show that this is a mistaken idea, and that by pursuing the course pointed out in this, and perhaps some future numbers, they may be reasonably sure of arriving at a moderate, but respectable competence, is our object in penning these articles.

But to come more directly to the subject in hand. One of the best reasons for commencing farming on a small scale, is found in the fact that farmers are often urged to work less land, and cultivate what they do work better. They are repeatedly told that a few acres well tilled would yield more clear profit, than twice or three times the amount of land as ordinarily cultivated. The correctness of this kind of reasoning is further shown, by the frequent publication of accounts of good crops and large profits, that have been realized by the skillful cultivation of a few acres in the best manner. All of which goes to show —what by experience and observation, we have also found to be true—that as large net proceeds or clear profits, may be made on a little farm of from fifteen to twenty acres, as is usually realized on fifty or sixty acres.

Another reason for farming on a small scale, will be found in the fact that it will have a tendency to improve the agriculture of the country generally; by showing that it is better policy to cultivate a little land in the best manner, and realize large returns thereby, than the more common way of running over large farms at a very little if any profit. Furthermore, we believe that one of the best ways to promote a system of farming, calculated to get the largest amount of produce from the least land, will be the course we recommend, for young men to pursue. For being anxious to improve their circumstances, they will labor and study to make their little farms produce the largest possible amouut, and at the same time having an eye to the sale of the place at some future time, will not allow it to deteriorate in value or productiveness on their hands. And men, once accustomed to the advantages and profits of cultivating land in the best manner, will not be likely to pursue a different course, when they become the owners of larger farms.

Farming on a small scale, is more particularly adapted to young men, for the reason that having but small families, if any at all, their expenses need not be large; conseqently, the principal part of their income may be used to pay debts, or saved to buy more land. In this, as in most other kinds of business, a man's net income or profits depend, not so much on what he produces, as on what he saves. For instance, a man that raises $1000 worth of produce at a cost of $900, is only gaining or laying up money half as fast as one that raises $500 worth at a cost of $300.

We further believe, that the course we recommend for young men, would be better than going into a new country, for the reason that twenty acres of good land may easily be made to yield as many dollars worth of produce, as 100 to 150 acres usually do in new sections remote from market. We also believe, that the same industry, economy, and self-denial, that was practiced by those sturdy pioneers, that as a general thing, without any money to begin with, settled on and cleared up the heavily timbered lands of Western New-York, would, if practiced by the young men of the present day, secure them a fair competence, in less time and with much less labor and hardship, than was necessary in the early settlement of the country, to say nothing about the labor and expense of making roads and bridges, building school houses and churches, or the liability to sickness consequent to a change of climate, and the clearing up and bringing into cultivation of a new rich soil. Besides, the satisfaction of living near friends and relations; and if necessary, being able to aid or take care of parents in old age, and the enjoyment of old associations and congenial society.

We also think that a young man can do better on a small farm, than he could by going into any mechanical pursuit. And also that he would be a great deal surer of eventually arriving at an independent position in respect to property, by taking the course we recommend, than he would by entering any of the crowded and overstocked professions or avenues of trade.

There are many other reasons for, and advantages of, commencing on a small farm that might be given, did time and space permit, but we must pass on to the consideration of the best course or system of management on a small farm, which will form the subject of another communication. F. *Orleans Co., N. Y.*, 1860.

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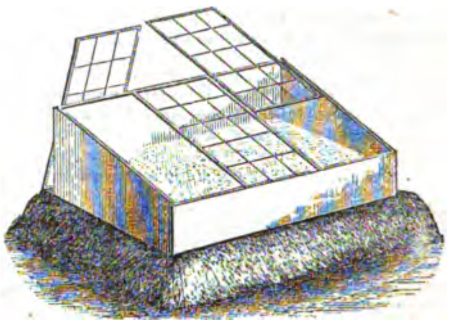

[For the Country Gentleman and Cultivator.]

HOW TO MAKE A HOT-BED

Eds. Co. Gent.—I send you my plan of putting up hot-beds. About ten days before I want to put up the bed, I throw the manure up in a pile about 8 feet broad and 4 feet high, and in length according to quantity. I set my beds about half under ground—that is, I dig about a foot deep, and throw the dirt on each side, which answers for banking up. I set the frames on blocks, or rather pieces of boards about 6 inches wide and as long as to hold the frames to their proper place. I set 4 blocks under each frame, and drive a stake inside of each block to hold them to their place. The stakes should be drove square with the frames to hold them stiff and to place. Bank up on the outside to the top of the frames with earth, and make the beds in length from ten to fifty sash, according to convenience; and when the beds are ready for the manure, they are 2 feet 4 inches on the lower, and 3 feet on the upper side, (and bottom level,) which is 8 inches fall. I put the manure in the bed 20 inches deep, evenly and well beaten down with the fork, but don't tramp it. I put the manure in very hot, just when it is in the height of fermenting, and put the mold on as I put the manure in, which keeps the heat in the manure. The mold I put about 8 inches deep, which fills the bed at the lower side, and being level, within 8 inches of the upper side. I let it stand a few days before sowing, and if the heat is too great, after settling about 4 inches, I put on two inches more mould. The heat is right when the weeds start freely. My object in setting the frame on blocks is to save manure, as it takes one-third less, which is a great object among gardeners in putting up two hundred sash.

Pittsburg, Pa. W. Petrie.

[For the Country Gentleman and Cultivator.]

Winter Butter.

Eds. Co. Gent.—I occasionally see inquiries in the Gent. in regard to making winter butter. Some find it difficult to make the "butter come," even after churning nearly the whole day. I will give you our method, if you think it worth the space it will occupy in your valuable paper.

Firstly, then, the fountain from which we obtain our milk is kept pure—that is, the cows are kept chiefly on hay, with a few roots, and a little meal and shorts, together with a *little* cut straw mixed with the meal once a day.

Secondly—The cows are kept *clean* by the use of a good bed of straw, and a card—so that when the milk is strained there is no *sediment* (manure) at the bottom of the pail—think butter better flavored and colored some other way.

Thirdly—the milk is strained into pans filled about half full, and immediately set into another pan, standing upon the stove, containing hot water and allowed to remain until scalded, or until the top of the milk appears wavy. It is then set away, and stands forty-eight hours, for the cream to rise. When the milk is skimmed, the cream is put into a stone churn (this is the kind we use) and thoroughly mixed by stirring, and when four days cream has accumulated, we churn. At the time of performing this operation we add a little carrot juice--say a middling sized carrot to every two pounds of butter—the carrots are washed and scraped, then grated fine, and the juice squeezed through a cotton cloth—this gives the butter a nice appearance, and we think, and so do others, that it improves the flavor. The churn is now set into hot water, and from fifteen to thirty minutes churning brings the butter. Care should be taken not to let the churn stand *too long* in hot water, as the butter might come soft. Neither the milk or cream should be allowed to freeze.

Fourthly—we have sold all our winter butter up to this time, (Feb 22d,) with the exception of one jar of 24 pounds, for 24 cents a pound—for this jar we got 20 cents. We make about 15 pounds a week from three cows—one farrow, the other two heifers, two years old in March—one calved the 6th of Dec. the other the 1st of Jan. J. L. R. *Jefferson Co., N. Y.*

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Artificial Stone Block for Building.

Messrs. Editors—I wish to get accurate and concise directions for preparing and mixing the mortar for "artificial stone," or "concrete blocks," spoken of by "J. E. S.," on page 109, vol. 5, of The Cultivator. Cannot some reader of your papers, who has had experience, give us a little more "light" on the subject?

If the "concrete" plan of building really has the advantages claimed by "J. E. S.," it ought to be fully discussed, and accurate directions given for preparing it.

How are "composition roofs" for buildings made? What materials are used, &c., and what advantages do they possess compared with shingled roofs? A. Babcock.

Union Co., Ill.

J. E. S. has given minute directions in the communication referred to, for every part of the operation but mixing the materials. We should say, take the best lime and mix it into mortar, with at least five or six times as much sharp, coarse, clear sand, the best for hardening perfectly. If a larger portion of lime is used, as some masons like, because it then works and spreads more easily, it will never become so hard—and an obstinate, ignorant mason will be sure to spoil the work. The success of this mode must depend upon the perfect hardening of the blocks. When the mortar is made, fill the boxes which are to give shape to the blocks, intermixing it during the operation with broken stone, small stone, &c., of all sizes, getting in as much stone as possible, for two reasons—first, they assist the hardening of the mortar, and secondly, they reduce the expense by diminishing the amount of mortar needed. But every interstice must be perfectly filled with mortar.

What we most want is the *result of experience* in this mode of building. J. E. S., as we understand him, only proposed it—had not tried it.

We should esteem it a favor if some of our readers who are familiar with all the details of the manufacture of composition roofs requisite for success, would give us the desired information.

[For the Country Gentleman and Cultivator.]

The Perennial Phloxes, &c.

Roses and Verbenas are considered as indispensable in every flower garden, be it ever so limited; and next to these, perhaps the Asters excepted, come the Perennial Phloxes. They require a deep, rich, moist soil, to fully develop their beauty. The varieties are numorous, and some of the new French varieties are really splendid. The best six, are:

Madame Soeur, white, purple center.
Surpasse Madame Rendatler, white, purple center, perpetual flowering.
Augustine Lierval, white, pink center, perpetual flowering.
Madame Audry, white, tinged with rose, violet center.
Juliette Roussel, white, purple center.
Rigolo, lilac and violet, mixed with white and red.

The cultivation is easy, and being perpetual they require but little care except annually manuring the beds, and when the clumps become too large take them up and divide them. They are rapidly propagated by cuttings in the spring or by division of the roots. The flower garden can be beautified by a judicious selection of varieties from July to October, and what renders them more valuable, they flower at a season when our gardens are nearly destitute of blooms.

The Phlox Drummondii is an annual, and also very beautiful, and dwarf in its habits, and suitable for large masses. Indeed, except the Verbena, we have no flowers so showy for a large bed as this one, with its various hues and tints, seldom finding two bushes bearing flowers alike.

In large yards or gardens the Dahlia is equally indispensable, and the Aster is of sufficient importance to have a chapter for itself. William Newcomb.

Rensselaer Co., N. Y.

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SQUASH BUG.

Can the editor or any reader of The Cultivator give a convenient and infallible remedy for the large brown squash bug? The kind of bug I speak of is of a dirty brown color, and emits a disagreeable odor, especially when disturbed or killed. This bug is a great pest to squash growers in this region, working nearly all summer upon the main trunk of the vine, at the base or near it. It also attacks the young squashes if it should fail in girdling the vine at the root. They destroyed 40 hills of Hubbards for me last summer.

Union Co, Ill. A. Babcock.

The only infallible remedy we know of, although not very "convenient," is to kill daily all the bugs that can be found. At the same time care should be taken to destroy the eggs, which are laid in little patches, and fastened by a cement to the under side of the leaves. A daily examination will not consume a great deal of time. Next to this, we can recommend the protection of wire frames covered with gauze, or boxes set with a pane of glass or piece of gauze. This insect, (the *Coreus tristis* of entomologists,) is common everywhere, and is very destructive to squashes and pumpkins. It is important to destroy them early in the season, before their number increases so much as to render it difficult, as well as before the plants are destroyed. A good time is early in the morning, before they have concealed themselves from their nightly depredations.

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[For the Country Gentleman and Cultivator.]

Putting in Spring Wheat, etc., Early.

In consequence of what happened last season in the partial destruction of the wheat crop, it may be that some farmers will feel a little timid on the subject of early sowing the spring varieties of cereals. But I think reflection will convince those who are open to the "logic of facts," that no alarm need be entertained for the comparative safety and success of early sown crops of rye, oats, barley, and especially of wheat. Usually the cold of spring is more intense, and of longer duration, in the open portions of Illinois and Wisconsin, than in the comparatively wooded or sheltered parts of Ohio, New-York, etc., in the same latitude. Yet, so far from entertaining a fear of frost-killing in the spring, the best or most successful farmers in the western States named, are now more strongly inclined to plant early, than they have ever been heretofore. The principal reason of this is, that early sown crops have a longer season—more time to grow—and being developed more *slowly*, are less liable therefore to the attacks of blight, rust, insects, &c., that appear to be principally incident to a too rapid growth under the influence of too much heat, with other favorable growing conditions.

In the Prairie Farmer of Feb. 16th, E. Stetson, of Bureau Co., Ill., says: "The *quality* of wheat is much improved by *early* seeding. A few years since," (probably in 1853, "during an open term in *March*, I sowed a part of a field to wheat, and the balance some three weeks later. No good judge of wheat would have pronounced the product of both parcels to be of the same variety, (Rio Grande.) The product of the early sowed was transparent, of a *bright* golden color, while the late sowing was dark and flinty, like the Black sea wheat." My own observation is confirmatory of this. I have noticed much of the Rio Grande that was *late* sown, to be unusually *dark* in color—considered as to its nutritive value, it is none the worse for this; because the nutritive element gluten, gives the dark color, and this fact of late sown wheat, which therefore makes more of its growth in a *high* temperature than such as is put in earlier, corresponds with the alleged fact, that southern wheat contains a larger proportion of gluten than that of the north. But the brightest wheat is always most sought after by millers, because it makes the brightest flour, and *early* sown producing the brighter product, is, for that reason of itself, produced at the greatest profit.

But there are other advantages incident to early seeding. A crop that is put in early—other conditions being similar—will yield from 10 to 20 per cent more from each acre. I have proved this by experiment, and think it may be explained consistently with good reasoning.

In 1855 I harrowed in a piece of Canada Club wheat, sowing nine pecks—(I never allowed less than eight)—to the acre, on fair clay loam soil, on the *12th of March*. Severe frost set in the next night, and the ground was frozen solid for eighteen or twenty days. The yield was 27½ bushels per acre; quality bright and good. Last year I sowed 24th of March, with a fair result for the season.

Now, as I maintain that every fact has a theory in nature—if reason can only find it out—it may be well to look to the remote causes of the superiority arising from early seeding. To do this, we must premise that the absorbent capacity of roots and branches, is as much limited by natural conditions and laws as size itself. In fact, it depends much upon the extent or size of a plant, as to the rate of growth it can make in a given time. There can be so many openings or pores, to admit the substances of growth, of a certain relative size in a root or leaf, of a given dimension or area. In favorable weather, a certain quantity of the elements of growth can be absorbed by the plant organs in an hour or a day, as much as the interior spaces are fitted to contain and digest, but the limits of this interior capacity—which varies as the structures of plants expand and contract under the influence of heat and humidity—at a given time, cannot be exceeded. A plant can no more digest a two days' supply in a single day, than I can digest two or three meals in the time naturally allotted to one only. And as the digestion, or assimilative functions of plants, largely depend upon the degree of heat and humidity, and the latter control the supply of organic plant food also to a great extent, the plant, unlike some other beings, takes in only as much as it can transform naturally and efficiently. The working powers of plants, those by which they absorb and grow, are, then, limited to the absorbtion and transformation of a given proportionate amount of earth and air within a given period. Though they grow seven days in a week, they will not make two days enlargement in twenty-four hours, because *light* is an essential of growth. If the capacity of growth within a given time is limited, then so also is the proportion of time in which growth may take place. We have therefore no reason to expect either as much or good growth, or as large and good quality of yield from late sown crops, as from those that are put into suitable growing conditions in the earliest part of the growing season.

It being impracticable to cover seed, or put it *in* well, till the ground is dry enough, putting in seed too early is generally impossible. The same degree of heat, or thereabouts, that will make grass grow, will, when the ground is not too wet, be sufficient to make wheat also germinate or grow. But, according to the *facts* which govern growth—"facts" giving the conditions upon which laws or rules are predicated—time is also essential to the plant work of large and excellent growth, as are absorption and transformation of the elements of its structure.

Growth that is made *early* in the season, is necessarily more compact, weighs more per given bulk than that made later in a higher temperature. The straw of early sown wheat is therefore stiffer, more perfect, and better adapted to its part, the subsequent formation of perfect seed. Superior tools for superior work. The seed will not only ripen earlier, but will be of better quality; superior produce of natural work. To expect the best crops of spring wheat, and the same is true of oats, rye, &c.—with good reason, then, we must sow early to give *time* for the natural work of the plant, as well as other conditions necessary to satisfactory results. J. W. Clarke.

Green Lake, Wis.

[For the Country Gentleman and Cultivator.]

CULTURE OF RUTA BAGAS.

Eds. Co. Gent.—Having been impressed with the influence of the root culture in British Agriculture, I induced my farmer, Mr. H. Jones, to cultivate last season one acre of Ashcroft's Purple Ruta Baga. The cultivation was as follows:

Ground plowed previous fall—clover sod of three years standing. In the spring well harrowed. Drills 30 inches apart, opened by a double furrow. A sub-soil plow run through in the bottom of the drills. About 12 wagon loads of barnyard manure then spread evenly in the drills. On this, spread 8 bushels of bone dust mixed with 16 bushels wood ashes; then covered drills by two furrows and sowed about 25th May, with Emery's seed drill, 1½ lbs. seed on the ridge. The turnips came up remarkably well and even. In due time they were weeded and cultivated fairly, but no extra labor, and I regret I have not the cost of this labor. The grasshoppers trimmed them pretty sharply in July and August, but they had got so well on that I do not think they did much harm. The crop was very even, and the tubers mostly ranged from 2 to 6 lbs., and some weighed over 10 lbs. The land was in about medium condition, sandy loam and some cobble stone.

We harvested 940 bushels, or about 28 tons net. They were stored for winter use in a barn cellar. I had my cellar partitioned into sections about 10 by 12 feet, the bottom and sides of lath 1 by 3 inches, so that the air circulates freely around the bottom and sides of each bin. They are now mostly fed out. Not a root has been injured by frost or other cause of decay. You will understand, the quantity of land was not guessed at, but accurately measured. John W. Jervis.

Oneida Co., N. Y., Feb. 15, 1860.

An Old Subscriber.—In 1833 I commenced taking the "Genesee Farmer," Vol. 3, (I wish I had 1st and 2d vols.) and have all of its subsequent volumes bound. Also the "Cultivator," complete from its commencement bound, until the Country Gentleman was commenced, since which I have that carefully preserved and bound. Together with other similar works, they form a most valuable library, interesting to every one, especially the farmer. To me it is surprising that so few preserve their papers. Surely a paper that is worth taking and reading is worth preserving. I know of no way that so cheap and valuable information can be procured, as through our several agricultural and horticultural publications. They are and have been exerting an influence for good to all classes of our country, that is not appreciated, and cannot be easily estimated. Success to your efforts. James McLallen.

☞ The Eleventh Annual Fair and Cattle Show of the Brookfield Agricultural Society, will be held on the 26th and 27th days of September next.

[For the Country Gentleman and Cultivator.]

HOW TO MAKE FARMING PAY.—No. II.

Necessity of Capital and a Knowledge of the Business—My own Experience—Cut Fodder—Protecting Animals and the Pecuniary Value of their Flesh if lost.

Farming, in one point of view, is not unlike some other occupations, and therefore in order to make it pay a fair profit, it is of the first importance that a farmer should *start* corectly.

When a man engages in the mercantile business, or opens a manufactory, he makes himself acquainted with, and, in a measure, master of his business. He feels that it is a very important consideration to have some *capital* to commence with. Who ever heard of a man opening a store, who had not first acquired some practical knowledge of the duties, &c., of a merchant. It is always desirable and very important, when engaging in any business, to have a good capital to begin with. And this is particularly true with regard to farming.

The first step, then, towards rendering farming a paying business is *a good agricultural education*. No man can expect to succeed in the cultivation of the soil who does not have a good understanding of the various operations of the farm. A farmer in order to succeed well in the cultivation of his soil must have some knowledge of soils —of their characteristics—and what system of management will *improve* them, and what will *impoverish* them. A man may become a very good shoemaker or joiner in one or two years, but it requires more than one decade of years to make a skillful, intelligent, and successful farmer, who will be capable of managing the affairs of even a small farm with discretion. The operations of a farm are so manifold that a farmer, if he expects to succeed in his business, must have a good smattering of agricultural chemistry, a good knowledge of mechanics and of the principles of draught, and of the laws of force and motion. People were once accustomed to think that if a boy or man was so unaccountably stupid that he could not, or would not, make a skillful mechanic, *he must be a farmer*. But there never was a more egregious error. Experience demonstrates, most conclusively, that the veriest clod-hopper in the land may succeed tolerably well in life if he serves a good apprenticeship at some one of the mechanical arts, and that were he to live coeval with the sun, he never could succeed in farming so as to *make it pay*.

In addition to education, a farmer must have some capital, as has just been observed. If a young man has a little agricultural education and but a few hundred dollars capital he may succeed tolerably well, providing he gets a good farm, and is an energetic, thorough-going man. But no man ever expects to succeed in mercantile business, or in any kind of manufacturing occupation, without having some considerable capital to commence with; nor can a man expect to move along in farming with a very small capital any more prosperously than one can in the mechanic arts with a very limited capital. It is not impossible—indeed it is quite practicable—to make farming pay a good interest on *borrowed capital*; but as a general rule it would be considered rather uphill business.

Dropping the discussion of these theoretical questions, I propose now to show how to make farming pay when the farm is a poor one, and the capital is very limited. And I know not how to do it in a more satisfactory manner to the readers of the Co. Gent., than by recording my own experience in the matter. Farmers always desire something *tangible* to aid them in their manual operations, and we all esteem a short article which tells us *what has been done*, *what is very practicable*, and *what may be done again*, more highly than we do a large volume which is replete with the most plausible theories.

I commenced farming on about thirty acres of plowable land. Most of this was old land, and the greater portion of it had been plowed and sowed ever since it was cleared up, and the produce had been carried down the Cayuga lake. Different owners had worked it themselves and rented it to different tenants every year since the country was settled, who had carried away from it everything that grew, without ever thinking or caring to *return* anything to it in the form of manure. Crop after crop was grown on it without any manure, until, in many instances, it was a matter of doubt whether the avails of a crop would repay the expense of simply harvesting it.

During the first season of my career, from eight to ten bushels of wheat, about eighteen or twenty of oats, and about eighteen bushels of Indian corn, per acre, was my average crop. It required nearly three acres of pasture per head, to keep my horses and cows during the summer. From ten to fifteen hundred pounds of hay per acre, was the maximum quantity; and in many places, the grass was not mowed, because it was so poor it would not pay for mowing. The result was, before the return of pasture, I was running about the neighborhood, like many of my neighbors, to find a little hay. My grain was threshed with a two-horse machine in autumn, and the straw thrown out of doors; and the consequence was, before winter was half gone, my straw was all used up.

I had always been instructed when plowing, not to turn up any of the subsoil, because "it was barren and cold, and would *spoil the soil*;" and as there was not a rod of drain on my farm, and as the soil had been only *skimmed over*, I came deliberately to the conclusion, that such a system of management would never answer for me; and the conclusion was, that a new leaf must be turned over.

The first thing then, was to adopt a system of management *which would give an increase of crops, from year to year, without purchasing foreign manure, or without impoverishing the soil*. Believing that such a system of management *is practicable*, the question arose, *how* am I to accomplish such an object, or how shall I render my plans *progressive*—tending to the end in view?

Now, if a system of management could be adopted which would obviate the necessity of purchasing hay to keep my stock through the winter, one very important step would be taken towards rendering farming *progressive*—or a paying business. In this dilemma, I procured a railway horse-power and thresher, and horse straw-cutter, and as soon as winter set in I commenced threshing my grain. After threshing a few hundred sheaves, the straw was cut up with a little hay and some cornstalks, and moistened with water and a little meal applied to it; after which it was fed in mangers. I did not wait in autumn, until my animals had begun to fall away in flesh before I commenced feeding them cut feed, but as soon as they did not seem to fill themselves well in the field, they received one or two feedings per day, as they seemed to need. In this way all the straw was used up in the most economical manner, and every spring, since I adopted this course, I have had hay to sell or to keep over. But in case I *did* sell any hay, I always made calculations to purchase more manure to return to my fields than could be made from the hay sold, if it had been fed out in my own yard. To cut this subject short, I may be allowed to say, that I have followed up this system to the letter until the present time; and I know that I keep more animals on the same quantity of fodder, and keep them in better condition than they do who do not cut their fodder.

Another very important step towards making farming pay, was—and it is true even at the present day—to provide comfortable sheds and stables for my animals, in cold and stormy weather.

I always considered—and do now—that every cow, calf and bullock, or sheep, is worth four cents per pound, live weight. Now then, my idea was—and it has *ever* been a rule of action with me—that if I could *retain* only one hundred pounds of cow flesh and fat per head, by expending two dollars or more per head, in erecting comfortable sheds and stalls—the fodder being always the same—my system would tend to render farming a paying operation.

Let us unfold this thought a little. Suppose we allow a good cow to lose one hundred pounds of fat and flesh during the winter—one hundred pounds will not make a very great difference in the appearance of a cow of good size, if she is tolerably fleshy—that one hundred pounds is worth, in cash, not less than eight dollars. It is in reality, worth *more* than this; because there is no portion of bone and offal in the part that is thus wasted away. Now, during the following season, such a cow must appropriate grass enough to replace this one hundred pounds of fat and flesh, to have made one hundred pounds of butter. No good farmer will deny this fact. Now, computing the value of that one hundred pounds of butter, aside from the expense of making it at twelve dollars, which added to the eight dollars, for the lost flesh and fat, we have a dead loss of twenty dollars per cow per annum, in consequence of not having comfortable sheds to protect them from the pelting storms and the pinching cold.

My principle was then, as it now is, that in order to make farming pay, every animal must be kept in a thriving condition; consequently every one receives a regular supply of food every morning and evening, with a portion of turnips, carrots, or potatoes, until grass comes; and when the winds howl, and he storms rage, I never lay me down to rest, until *I know* that every animal has been well fed and is in comfortable quarters. S. E. Todd. *Lake Ridge.*

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Buist's Dwarf Okra Plant.

The Okra plant is of the Mallow tribe, and of a southern or warm climate, though it grows rapidly, and succeeds well in the middle States. We have raised it in gardens between the 42d and 43d degree of latitude. It is valuable for the healthful and highly agreeable mucilage obtained from the fruit, which grows at the joints of the branches in the form of upright cones or pods; these are cut up and boiled in soups, and give them a rich flavor. It is necessary to take off the pods while tender, after they have attained their full size, and before they harden and ripen, which they do in one or two days afterwards. Their tenderness can be ascertained by the point of a knife, and this period of the growth of the pod must be watched, as after they become dry and hard, they afford little of the glutinous matter, and are worthless, except their seeds be used as a substitute for coffee, for which they are admirable. The *green pods* are also pickled; and are frequently dried and preserved for winter use by hanging on strings. They are even boiled like asparagus, and eaten with drawn butter.

We are indebted to Mr. Robert Buist, seedsman, Philadelphia, for the engraving given above, which represents "Buist's Dwarf Okra," which produces pods at every joint. It is said to grow two feet high, about half the height of the old variety, and its superior advantages are that it requires much less ground to raise a given quantity, being more fruitful, while the fruit is larger in quantity and better in quality.

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Do good to others—it will come back to you. The water which you pour on the roots of the cocoanut tree comes back to you sweetened from the top.

[For the Country Gentleman and Cultivator.]

Cheap Paint.

Eds. Co. Gent.—I see in the "Co Gent." an inquiry for a cheap paint. Enclosed is one I sent to the "Niagara Mail" in Jan., which I *know* to be first best.

Take one bushel of unslacked lime and slack it with cold water; when slacked add to it 20 lbs. of Spanish whiting, 17 lbs. of salt and 12 lbs. of sugar. Strain this mixture through a wire sieve, and it will be fit for use after reducing with cold water. This is intended for the outside of buildings, or where it is exposed to the weather. In order to give a good color three coats are necessary on brick and two on wood. It may be laid on with a brush similar to whitewash. Each coat must have sufficient time to dry before the next is applied.

For painting inside walls, take as before, one bushel of unslacked lime, 3 lbs of sugar, 5 lbs. of salt, and prepare as above, and apply with a brush.

I have used it on brick, and find it well calculated to preserve them—it is far preferable to oil paint. I have used it on wood, and assure you that it will last longer on rough siding than oil paint will on plained siding or boards.

You can make any color you please; if you wish straw color, use yellow ochre instead of whitening; for lemon color, ochre and chrome yellow; for lead and slate color, lampblack; for blue, indigo; for green, chrome green. The different kinds of paint will not cost more than one-fourth as much as oil paints, including labor of putting on. Galloway.

Clifton, C. W.

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[For the Country Gentleman and Cultivator.]

Treatment of Burns.

Messrs. Editors—Flour has been extensively recommended for burns; but seeing it tried several times, increasing the pain intolerably in every instance, I would not use it, nor have it used. But a short time ago one of my family was scalded on the hand quite badly—flour was first applied, but could not be borne. Next the skin of hog's lard was applied, which relieved the pain almost at once, and entirely. If the skin of lard cannot be had, oiled silk would be a good substitute. If you can make use of the above to relieve a moment's pain, you and I will have our reward. P. P. Peckham.

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[For the Country Gentleman and Cultivator.]

Pie Melon and Ground Cherry.

Eds. Co. Gent.—I see much is said about the Japan Apple Melon. I raised some last season and find them a good substitute for apples to make pies. They also make good preserves and sweet pickles. I have two on hand now. My largest weighed 35, 37, and 46 pounds.

The Ground Cherry I have cultivated for two years. They make a delicious pie and very nice preserves, and are very palatable to eat when ripe. They are easily cultivated, and yield abundant. I think them worth cultivating; they keep until mid-winter. P. Whittlesey.

Wallingford, Conn., Feb. 3, 1860.

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Cooking the Sweet Potato.

In a late no., I noticed an article on the culture of sweet potatoes. Now I will tell you two or three ways of preparing them for the table, besides baking, steaming, &c.

1. Potato Pudding.—Wash the potatoes, peal and grate them, (using a large coarse grater,) then take of the grated potato, eggs, butter, either sugar or molasses, (the latter is best) and milk sufficient for a batter—bake in a deep dish without crust—stir two or three times whilst cooking, and then bake brown. Flavor as desired.

2. Potato Custard.—Boil the potatoes, skin and mash them—then with the mashed potatoes, butter, eggs, sugar and milk, make a batter and bake with one crust in a shallow dish. Flavor as desired.

3. Potato Pie.—Peal the potatoes, slice—take sugar and water sufficient to make a syrup to cover the potatoes, add a little butter and some spices, and cook until the slices are softened—then make into pies with two crusts.

4. Fried Potatoes.—Peal them, slice and sprinkle with a little fine salt, then fry till moderately brown, in butter or lard—if in butter, no salt is needed.

We depend very much upon sweet potatoes for fattening pork—on our sandy lands. The red and yellow varieties are much planted, but the Spanish is much preferable for table use. This kind is rather dry and insipid when first dug, but upon exposure to the air, becomes very sweet and even syrupy. W. Nicholson. *Perquimans Co., N. C.*

AGRICULTURAL EDUCATION.

☞ The subject of Agricultural Education for American purposes, is one to the difficulties of which we have heretofore referred, while for the present generally contenting ourselves with a simple record of the efforts made toward their solution. The latest of these, the Agricultural Lecture Course at Yale, we announced some months in advance of its appointed time, and by subsequently recurring to it as occasion offered, we endeavored to do our share towards attracting thitherward the steps of the farmers of the country. Which endeavors, by the way, appear to have at least created a strong desire for the publication of the Lectures delivered—a matter quite impracticable as well as impolitic—the former, because much was said that was wholly or partly extemporaneous, and because what was written is the individual property of the writers, who may require it for other uses—the latter, from the simple reason that the course is to be an Annual one, and that much of the inducement to attend will be lost, if it is anticipated that for a Dollar or two we can subsequently purchase the whole in print. Nor is this a selfish consideration on the part of the directors—the great value of such a course lies in its drawing together as large a number as possible from all sections of the country—a source of usefulness at once discarded if the chief source of attraction is put in hazard.

Farmers peculiarly are of that class, to whom, according to the scripture, "faith cometh by hearing." Nine out of ten who would refuse to read, or pay no regard to anything they should read, would perhaps receive the same information or item of experience from the lips and voice of a neighbor as an immediate lesson to themselves.

Hence it is that the Discussions are becoming so important and interesting a part of our Agricultural Meetings and Shows. While a whole evening expended in this way, may witness the utterance of much more that is random and unqualified where accuracy and limitation are especially necessary—of much less either in amount or variety that is practically useful as a contribution from actual experience, than any one number for instance of the Co. Gent., may possibly afford, there are not a few who would enjoy the one away from home better than the other at their own fireside, and perhaps receive from it a degree of benefit greater in proportion to the greater attention awakened and thought bestowed.

From a notice elsewhere of the concluding address of Prof. Porter at New-Haven, it will be seen that another year the Lectures there are to be renewed with still greater efforts to render them effective of good. Such a course has the advantage over ordinary discussion, of presenting the observation or the experience of careful and trustworthy men, *well-matured for the occasion*, and subsequently overhauled and sifted by questions and by debate. Yale College, as a center for such a convention, renders New-Haven a prominent point by its high scientific and educational standing, and the proposed establishment of an Experimental Farm will also add to the advantages of the place. But it is not an idea of which Yale is destined to retain the monopoly. The propriety of taking some measures of a similar kind, during another Annual Meeting of our State Agricultural Society in this city, has already been mooted, and the example of our Connecticut friends only requires a little more testing to be extensively imitated. The *Herkimer Co. Journal*, published at Little Falls, in this State, comes to us with the following sensible suggestions:—

> Yale is doing what might be done here, on a smaller scale; but with great advantage we think to our Young Farmers.
>
> A course of Lectures on Agriculture should be delivered at our Academies and Seminaries every winter. A considerable number of young men from the surrounding country go to School at the Academy only during the Winter Term. To these a course of Lectures on Agriculture from practical men would be invaluable, as it would stimulate them to look deeper into the subject, and thus lay the foundation of future improvement and success.
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> Nor need these Lectures be expensive. There are practical men in the several departments of agriculture to be found in our own County, who are capable of giving a first class lecture, on some particular branch of the subject. Let a dozen such men be engaged, with perhaps a few from abroad, and we have no doubt this feature alone in the Programme of Academic Education, would awaken an interest in our schools throughout the community, which would amply pay all expenses for lectures.

[For the Country Gentleman and Cultivator.]

CULTURE OF FLAX.

Eds. Country Gentleman—I have had considerable experience in flax culture during the last 28 years. Large quantities are raised in my section of country, and having two flax machines on my farm, and also a factory for spinning flax into shoe thread, carpet yarn, twine, &c., has necessarily given me considerable experience in this crop.

Flax requires upland, and a loamy soil, or a loam with gravel or sand, or a clay soil if it can be in season put in proper tilth. It does not, like corn, thrive well on a sward ley, but succeeds best after corn, and tolerably well after potatoes. It requires, like most other crops, to be got in in good season. From various experiments, I find one bushel of seed to the acre the best, where we unite the seed and lint for the profits of the crop. The ground must be made mellow with the drag before sowing the seed, and dragged as lightly as possible after the seed is sown, for very little if any of the seed will grow if deeply covered.

The ordinary yield is from 8 to 10 bushels of seed and from 250 to 300 lbs. lint.

In former years much flax was water-rotted, but from the fact that the U. S. Government has not patronized, for the last 15 years, the making of duck for the navy, there has been but little demand for water-rotted flax, and this method has been abandoned. It is now, after the seed is off, spread on grass lands, thinly and evenly, and dew rotted. It gives a trifle more weight by dew rotting.

The expense of the crop until harvesting it, is about the same as oats. In pulling the flax, which must be done if you wish to save the lint, a fair hand will pull his acre in three days. I had 55 acres pulled by hands at $1 per day, at an expense of $2.75 per acre. The seed would average one year with another, about $1.50 per bushel, and the lint about 10 cents per lb.; but the past season the price for good flax has been 15 cents per lb.

The flax crop is usually taken by the mill men when pulled, from the farmers, but where the farmers take care of their own flax they can get it dressed and fitted for market at $2 to $2.50 per 100 lbs.

If seed only is the object in sowing, from one-half to two-thirds of the quantity ought to be sown; and if the lint only is the object then one and a half bushel of seed is not too much per acre. In Europe double the last quantity is sown, but in every experiment tried in this country, where three or four bushels per acre have been sown, it has proved an entire failure of the crop. I handled a crop of two acres and seventeen one-hundredths, raised by a neighbor the past season; although this was rather an extraordinary crop, the sales of seed and lint amounted to $195.19, and the whole expense of the crop was a little over $40, leaving a net profit of nearly $70 per acre. The amount of flax raised in the United States does not approach near the consumption, and very large amounts are annually imported. The statistics of New-York in 1855, show near five millions of lbs. of lint raised in this State, but the numerous impossibilities there stated, render the returns useless for any calculations.

The only difficulty in raising this crop is the bulkiness of the product, which will not allow of transportation to any great distance; consequently it can be profitably raised only in the neighborhood of flax mills; but when once dressed, it will bear transportation to any point for a market. William Newcomb. *Rensselaer Co. N. Y.*

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South Downs.—Mr. J. C. Taylor, Holmdel, N. J., has recently sold several South Down rams, to go to California. Among them, one to Messrs. Crosby & Dibblee, whom they named "Golden Fleece." He was from the imported ram Frank, bred by Mr. Webb, and a Webb ewe, bred by Col. Morris—was of large size and heavy fleece, having sheared 8 lbs. when a yearling. These gentlemen are going into sheep raising extensively, having a "ranche" of over 13,000 acres near Los Angeles. He has also sold several ram lambs, all got by his noted "World's Prize" ram, to Mr. Stanwood of Sacramento.

Writing for the Papers.

☞ "Probably," writes an esteemed correspondent whose letter is just received—"when you penned the article asking your readers 'whether experienced with the pen or not,' to 'do good and communicate,' you were not aware of the amount of *talent* that would respond to the call, or perhaps you would have been less confident of not having your 'supplies overstocked.'"

Our friend is only one among many to whom our acknowledgments are due for liberal and valuable 'communications' during the past two months—large numbers of which have already been published, while many more are filed for seasonable opportunity to appear. But very few are perhaps aware of the quantity of manuscript grain, that must go into our compositors' mill to bring forth the grist which is returned to our readers. The amount of paper occupied by pen and ink in the preparation of each printed column, bears something the same relation to the regular and compact lines which this great Art compresses in bulk while it multiplies in numbers—as the pyramids to a hay stack, or the cotton 'lint' that flies loosely from the gin, to the same product pressed and baled for the market. Consequently, although not a mail arrives without bringing from widely scattered sources, some contribution or other to our stores, the ever recurring draft they sustain is so great, that we are scarcely more apprehensive of 'overstocked supplies,' than we are that all the farmers of the land will simultaneously put in practice the doctrines we are teaching, and spoil the 'profits of their business' by the immense crops and consequent low prices that would ensue.

This remark recalls one consideration which, although very old in our own mind, has perhaps never been expressed in so many words. One of the most successful and thorough-going florists and plant growers whom we ever knew, now—if an exemplary life ever deserved such reward—at home where

— — "the forget-me-nots of the angels"

require neither culture nor human care—when asked to describe in print his methods of propagation and growth, used to answer with native shrewdness, more generous always of his money than of the secrets of his trade, "Let others find out for themselves, as I did."

There need be, however, no fear in telling all the secrets of nature or art that one can learn, either in Agriculture or Horticulture—arising from any danger that too many will at once rush into the ranks of improvement. Men, like children, require "line upon line, and precept upon precept." And we do not hesitate to say that our correspondents may send us the fullest particulars of all the experience they have gained or any discoveries they may have made, without the slightest peril of thereby creating injurious competition in farming or gardening. If we should publish this month, in the way of an ordinary editorial or communication, a perfect and complete specific against the wheat midge or the curculio, we doubt if the price of plums would be a cent lower in the New-York market next autumn, or if their daily bread could then be purchased any cheaper by the consumers of that metropolis.

This is the case because important changes for the better or worse resemble almost invariably the forest which old Time rears to gradual maturity, rather than the gourd that sprang up in a night for the prophet. Of a hundred who should try either of the specifics we have suggested—if indeed there were so many who would go beyond the casual remark—"Well now, that looks reasonable enough,"—probably a number would fail in the care requisite to ensure a fair trial; others might tire before the process was complete; only a very few would verify its correctness by ultimate success.

Perhaps it will be thought that we place too low an estimate upon the enterprise—nay, even upon the common sense of our readers, in such statements as these. The truth nevertheless is unmistakable; nor will it seem as strange, as it might at first be regarded, if each of us—whatever his position or pursuit—should soberly ask himself the question, "Has my life invariably been in accordance with the dictates of reason—have I never failed to grasp an opportunity of improvement?" The calculation was not very long ago presented as to the money value by which the lands of this State might be increased if they were all properly drained; to which some thoughtful objector responded by saying that when our territory was all thus put in order for tillage, there would be no market for its immense production. He need have given himself no uneasiness; by the time the Anti-Utopians (as a correspondent elsewhere styles them,) are all exterminated, our population will have incalculably increased, and perhaps Macaulay's antiquarian New-Zealander will have already taken his meditative seat among the ruins of London Bridge.

The moral, then, of these discursive notes, is simply as before—Let all contribute as they can to open channels of light in the dark places of our farming; out of much discussion, here and there shall we prompt to some real and tangible advance, and the example of one successful man will exert an influence upon others in constantly widening circles. A careful thinker, as well as thorough practical farmer, said in our office the other day: there have been just as good farmers among our fathers as there are now—just as careful observers, just as earnest thinkers, just as progressive cultivators. But the great advantage of the Agricultural papers of our day is, that they bring to light what this class of farmers can accomplish; their example, which formerly appeared to their neighbors as merely an instance of good luck, is now thoroughly sifted and discussed; the measures of advancement they take are disseminated and pushed on, instead of going with them to their graves. "I perceive," he added in effect, "a constant and remarkable change for the better, precisely in this direction, in your publications; you are continually drawing out the experience of those who have not before written, and as I never met a man who could not tell me something, so there is not a number issued that contains nothing to ponder and nothing to practice."

[For the Country Gentleman and Cultivator.]

Brussels Sprouts.

This variety of cabbage is supposed to have originated from the Savoy. It is a celebrated vegetable in Europe, especially near Bruxelles and other large towns in Flanders, where from October to April, it is an every day dish on the table of both the rich and the poor.—*Buist's Kitchen Garden.*

Wherever this fine vegetable will stand out of doors during the winter, it is invaluable, as furnishing a rich vegetable fresh from the grounds. Where it will not, as in these northern latitudes, an excellent way is to give them a pit, where they can be preserved in all their freshness. We recently saw at a neighbor's, a pit full of these little cabbage, from which the gardener supplied the family. They are simply taken up just before winter and planted in these pits, and covered with litter in extra cold weather. EDGAR SANDERS.

PLANTING SUGAR ORCHARDS.

In regard to planting sugar maples on stony hill-sides, recently noticed in this paper, (Co. Gent. Feb. 2, 1860,) a correspondent of the New-England Farmer remarks:

"I have a sugar orchard on the top, and just over the east side of a hill, and I think it yields more sap and of better quality than on level land, and the leaves not only keep the land on which the trees stand in the highest state of fertility, but a nearly equal area on the side of the hill below is kept in quite a productive state; and this land being sheltered by a belt of timber on the south, and by high hills on the opposite side of the valley, east and north-east, I have planted a small orchard of apple-trees upon it, and by throwing brush on the land to catch the leaves, I succeed in getting a better growth than on another orchard on good level land well cultivated."

The same writer remarks upon the known variation in the quality and quantity of sap yielded by maple trees of the same size, and suggests the trial of experiments to ascertain whether this superiority could be propagated by grafting seedling trees from the best sugar yielding sorts.

THE CALF QUESTION—A GOOD BARN.

Calves should be Raised, not Sold—Cost of the Milk they Consume—Mr. Thayer's Way of Saving $14 per Head—The Stock of Mr. Sawyer and Mr. Davis—Description of Mr. Sawyer's New Barn.

MESSRS. EDS.—Under the above caption, a "Maryland Farmer" has an article in the Co. Gent. of 5th of Jan., in which he gives his views and method of raising calves. To this, Mr. Pettee, in the Co. Gent. of 19th, replies, and gives the weights and price of calves in his section of Connecticut, saying that at six weeks old, good calves will weigh from 150 to 180 lbs., and bring from six to seven cents per pound, live weight. The average weight then, is 165 lbs., and average price six and a half cents per lb., live weight; these figures make the average value of the calves $10.72½. This looks like a large price for calves six weeks old. In saying so, I do not in the least call in question Mr. Pettee's statements. But there is another view to be taken in connection with this question, by all those that can readily sell their milk at four cents per quart. (I have been selling milk all winter at five cents.)

To fatten one of these large calves, it will require upon an average at least eight quarts of milk per day for the six weeks—that is, forty-two days. Eight quarts per day for forty-two days, is 336 quarts, which at four cents a quart, amounts to $13.44. The calf at three days old will sell for a dollar at least, making $14.44, instead of $10.72½, for the calf at six weeks old. And I think it will be much better for the cow to be milked, than to be suckled and punched by these large calves.

Mr. Pettee further says, he has in two or three instances sold calves who have run with their mothers three months, for $15 to $20, which he considered the most profit he could get from the milk. To many, $20 for a calf three months old, would be thought a great price. But in the New-York cattle market, 29th of December, a premium calf four and a half months old, weighing 650 lbs., sold for $47.50, or 7⅓ cts per pound, live weight.

A certain number of calves must be annually raised, to replace, in time, the cattle slaughtered for beef, and otherwise disposed of; and it should be the study of the farmer to ascertain the most profitable method of keeping up this supply. But farmers differ widely in this matter. Mr. Pettee thinks it better to sell his calves for veal, and purchase store calves in the fall from drovers, who obtain their stock in Northern or Southern New-York, where there is no such demand for veals. The "Maryland Farmer" thinks it more profitable for him to raise his calves, and gives his reasons therefor. These reasons, as well as those of Mr. P., are before the readers of this paper, and I leave it with them to draw their own conclusions. But in connection with the foregoing, I will give the method of raising calves by two other farmers.

In Colman's 2nd Report of the Ag. of Massachusetts, is a copy of a letter from Minot Thayer, a farmer of Braintree, to Mr. C., on "Raising Calves," which says: "In answer to your inquiries respecting the mode which I have adopted in raising cattle for ten or more years past, I can merely say, those that I have raised within the above time, have not cost me more than one-quarter part as much as those I formerly raised. They used generally to be with the cow from eight to ten weeks. The usual quantity of milk they took, was about eight quarts per day each; the common price of milk has been twelve and a half cents per gallon, and four cents per single quart, and more sold by the quart than by the gallon. Upon calculation, you will see that it would cost about $17, upon the lowest price of milk, to prepare a calf to go to pasture.

"Another difficulty which arises from letting the calves take the milk from the cow, is when you turn them to the pasture they are very uneasy, continually bawling after their mother, eat but little, and fall away in flesh, and are often stinted. The expense of raising them in the old way has been so much that scarcely a single calf is raised in this vicinity. Consequently our farmers have bought their young cattle from droves from different parts of the country, and have had no opportunity to select the breed, the result of which is a *miserable breed of cattle*. Now sir, the method which I have adopted (with great success) is: I take my calves from the cow when three or four days old. I take a small quantity of good English hay, and make a tea from it; I add a small quantity of milk, and a very little molasses to it. The calf drinks it freely, and very soon becomes very fond of it, and having got the taste, will eat hay at three weeks old with as much eagerness as a calf will usually eat grass at ten weeks old. As they increase in age I decrease in the quantity of milk, unless I happen to have a large quantity of poor milk. I make the tea pretty strong, and give them about as much as they would usually require of milk twice a day, with a few carrots cut up fine, and also as much good hay as they will eat. The hay the tea is made of is not lost, as the cattle will eat it all. I think a calf may be raised till it is ten weeks old, in the manner I have adopted, for the small sum of three dollars; the trouble is but trifling. I have no difficulty in selling my cows from fifty dollars to a much higher price."

The above, somewhat abridged, is Mr. Thayer's method of raising calves, and a very similar plan is pursued by many farmers in that section of New-Hampshire where I reside.

This morning (26th of Jan.) I rode four miles to call upon one of our young, enterprising farmers, to take a look at his last spring calves—and other stock. Some ten months ago, cows were readily saleable here at a good price. This farmer (Chas. P. Sawyer) sold all but two; these calved in March, and he also purchased six more calves when they were three days old, for which he paid one dollar each. The eight calves were raised mostly on hay tea, the skim milk of the two cows was mostly mixed with the hay tea, which was given them night and morning—at noon they were fed with a porridge. They are now a very fair lot of calves, quite as good as are those that take the milk from the cows for eight or ten weeks. He has recently refused ten dollars each for two of them. Two years ago the coming spring he raised fourteen calves on three cows. He now has two calves, a few weeks old, for which he paid one dollar each. At this time he has only a farrow cow that gives milk—yet these young calves look as well as those do of the same age that suckle the cows. Mr. Sawyer has made money by raising young stock, and other branches of farming, to which I will again allude. I also called upon Paine Davis, another of our intelligent young farmers. At the commencement of winter he had fifty-one head of cattle; since which he has sold 4 oxen, 8 two year old steers, and 4 calves. He now has 35 head of cattle, eleven of which are last spring calves—four of them he raised. Late in the fall, some thirty miles north of this, he purchased eleven last-spring calves; for these, upon an average, he paid $3.75. The four he raised, and the eleven purchased were raised upon skim milk, hay tea, &c. Another of our farmers raised eleven last spring, having for them only the milk of three cows. It is my impression that the calves that take the milk from the cows, if they have a full supply, generally *look better*, when turned to grass at the age of ten weeks, than those do that are brought up *by hand*. But according to Mr. Thayer's figures it costs about $17.00 to raise a calf on the cow to the age of ten weeks, and only about three dollars when fed on skim milk, hay tea, &c., making a difference in the cost of a calf ten weeks old of $14.00. Difference in location, or the place in which different farmers may reside, the price of butter, milk, veal, hay, pasture, &c., are matters that each farmer should take into consideration in the disposal and management of his calves. In these matters he should "apply the sober second thought." What might be profitable in one place for A, B and C, in the management of their calves in their section of country, might not prove so for D, E, F and G, in their section.

In the Co. Gent. of the 12th inst., under the heading of "Sheltering Cattle," I had something to say of our New-Hampshire barns. The past season, Chas. P. Sawyer of this town, built him a No. 1 barn, which as it has some peculiarities about it, I will attempt a description. It is 80 by 40—18 feet posts; every stick of the timber was sawed, and every part built in the most thorough manner. There were 50,000 feet of timber, boards and plank (board measure) used in its structure—nearly all of which was of white Norway and yellow pine; 30,000 of No. 1 pine shingles were used in covering the roof the barn and an L part, which is 40 by 16; also six thousand of clapboards for covering the sides. The hovel, or tie-up, on the south side of the barn, is 80 by 14; in which thirty-six cattle can be tied up—the cattle standing on a raised platform. There are four sliding doors of good width, hung upon rollers, opening from the yard into the hovel, which is well lighted with several sliding windows, of large squares of glass—(not the little 7 by 9 lights.) There is a cellar under the whole, (80 by 40,) the walls of which are of split granite. The south side and ends, only, of the cellar are walled; the back side is boarded and clapboarded from the eaves nearly down to the bottom of the cellar. In this large cellar there is neither "post nor pillar." The floor timbers, sills, &c., are all supported by numerous round iron rods passing through the sills, girths, beams, and rafters—these last are double. The cost of the iron was from $75 to $80. After his barn was well filled with his hay, grain, and corn crop, the floor had settled only about two inches. The lower part of the L is used for calf-pens and a few sheep. The upper part for his fowls; the chamber is well lighted, and the fowls have the range of the cellar—for which they appear to be very grateful. He has 22 hens, all except one are last season pullets. From the 1st day of Jan. to the 24th, he has sold twenty-eight dozen eggs. They lay upon an average, fifteen eggs per day.

The cost of his barn, without taxing anything for his his own labor and that of his oxen, nor reckoning anything for board of hands, &c., foots up $1,200. To spout the eaves and paint the barn, will add another $100 to the cost. Mr. Sawyer, by fourteen years' labor, has fully settled the question that money can be made by farming, even here, on the almost worn-out farms of the "Old Granite State." He is no believer in what is termed "luck;" but he is a firm believer in the necessity of the farmer's exercising care, diligence, and a love for his vocation, if he wishes to succeed in his business.

Warner, N. H. LEVI BARTLETT.

COVERING TENDER STEMS.

"I observe that directions are often given for covering tender grapevines, raspberries, &c., with only two or three inches of earth. How can this be of any use, seeing that this covering freezes as solid as stone, and the frost often goes down a foot lower? A NOVICE."

Protection of half-hardy stems does not have so much influence on the actual temperature, as in modifying changes. If for instance, a young peach tree is dug up for transplanting, and while the roots are out, it is frozen stiff. If set into the earth before any thawing takes place, the tree will not sustain any injury; but if it thaws in the air it is ruined. The difference is entirely owing to the manner in which the frost is abstracted. This result is obvious if we look at young nursery trees—the roots of which are frozen *in the* earth and thawed again, every winter. A covering of an inch or two of earth is sufficient to alter wholly the effects of the thawing on the grapevine or raspberry-cane. Some difference has often been observed by fruit growers, even in the manner in which plants are thawed in the open air. If, for example, after an intensely cold and clear night, the morning sun bursts out and produces a sudden warmth, the destruction of the parts is much more complete than if the change is gradual through the influence of a mantle of clouds. Gardeners have often observed that box edging, if shaded by a building, will be fresh and green in spring; while, if exposed to the full rays of the sun after a hard freezing, they will be turned brown or killed. The shading of buildings or steep hills on the east side of fruit trees, has sometimes saved the crop, the cause of the loss on adjacent trees not thus protected, being erroneously attributed to *east wind* instead of the morning sun.

The common practice of covering the stems of tender shrubs with straw is a further illustration of the same principle. An inch or two of straw could not of course keep the tree actually warmer while the thermometer is ten degrees below zero, and the wind sweeping through it for twenty hours; the protection it affords is not unlike that given by the thin coating of earth, but less efficient. Evergreen branches operate partially in the same way.

Raising New Sorts of the Strawberry.

Will you inform me how I can raise new kinds of strawberry best from the seed? A. W.

Plant the fresh newly washed-out seed, a fourth to half an inch deep in very rich and finely pulverized beds, and keep the surface moist and shaded. Many new plants spring up spontaneously in bearing strawberry beds, from the fallen and decaying berries, and thus excellent sorts become mixed with poorer. The strawberry is the easiest fruit to raise new sorts from by crossing. For if the bearing sort which produces the seed is a pistillate, it must be fertilized by some staminate; and thus *every seed* is a cross between the two—the seed, not the berry, being affected the first year. Every seed in every berry of Burr's New Pine, Hovey's Seedling, and other pistillates, are necessarily always crosses. We would recommend the following as suitable varieties to produce seed for this purpose: Burr's New Pine, fertilized with Hooker and Wilson; old Hudson fertilized by Hooker; Hovey's Seedling fertilized with Early Scarlet and Walker's Seedling, &c.

Requisites for Making Good Butter.

What are the requisites for making the best butter? A.

There are a few butter-makers who have established such a reputation for making the very finest article, that all they can spare for market is eagerly taken at several cents a pound above the market price. So far as we know, they all adopt the following rules; or if they do not, they practice them:

1. A perfectly clean cellar, not only clean from all dirt, but from every bad odor—pure, sweet, and fresh.
2. Perfectly clean, well aired vessels. Not an infinitessimal speck of any foreign or sour substance adheres to any of them.
3. Churning before the cream becomes old.
4. Securing such a temperature that it will require about half an hour for churning—if performed much sooner, a loss of butter must occur, and it is not so good.
5. Work all the buttermilk out, which is rarely done—and work no longer, which is still more rarely, but sometimes done.
6. Use the purest salt—and add an ounce to a pound.
7. Pack the butter in the jars or firkins *solid*—put as much in a small space as possible.
8. Lastly, and first also, provide good sweet pasture, and plenty of perfectly pure water for the cows at all times.

If any have practiced all these, and have not succeeded, we should like to hear from them. It is proper to state, however, that there are some who assert that their vessels, &c. are clean, when in fact they are far from it.

CURE FOR SCRATCHES.

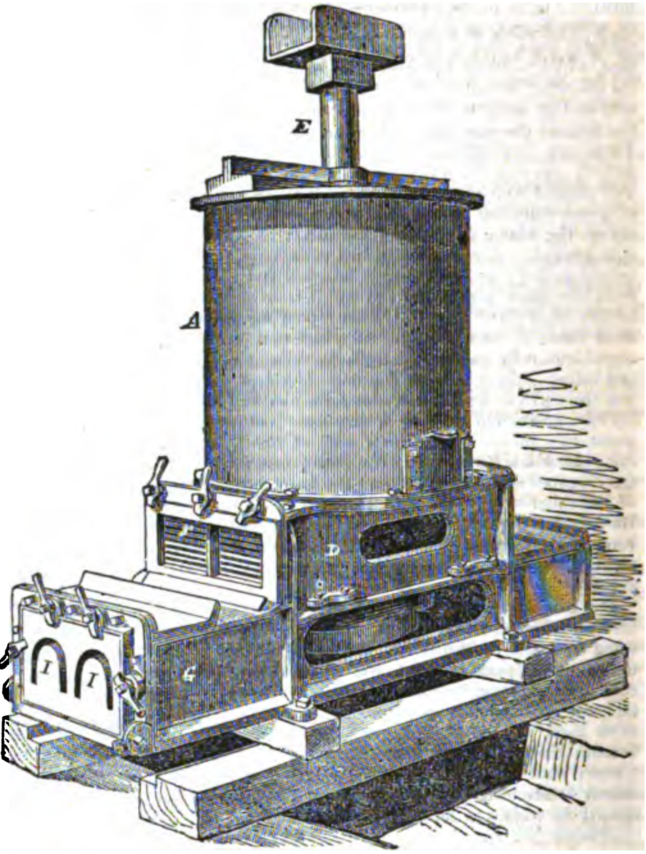
I will send you a receipt to cure the scratches. Take a little white percipite pounded fine, mix with fresh butter or lard, and wash the part affected with suds, and dry it—then apply the ointment once a day. Two or three applications is sufficient. This I think is ahead of all others.

Butternuts. J. H. R.

Smith & Winegar's Tile Machine.

This machine was invented by Samuel M. Smith and Caleb Winegar of Union Springs, N. Y. Having had an opportunity of witnessing its working, we can commend it to tile manufacturers as a valuable invention. Its prominent advantage is in performing *at one operation* the work of grinding the clay, screening it from gravel and forming it into tile. It is usually driven by horse power, but water or steam may be employed. The tile thus made we find is better formed generally, than such as is made by hand machines, on account of the stiffer consistency of the clay which may be employed by the more powerful propelling force. The softer material required for manual labor often causes the tile to settle out of shape.

The annexed figure is a well executed representation of this tile machine. The clay, with a sufficient portion of water, is first supplied to the mill A, and when ground by the power applied to the shaft E, it passes down into the box D, and is pressed by a reciprocating plunger through screen, F, and drops into the box, G. It is again pressed by the same moving power through the dies, I I, on the carriages, and ready to be placed on the drying boards. This machine makes all sizes and forms, from one and a half to twelve inches in diameter, and the inventors say it will make twelve hundred 2-inch tile per hour, which statement we have no reason to doubt. For ordinary every-day work, about 600 are made in an hour. It is made of iron, and appears substantial and durable. The working parts being visible and accessible, any coarse gravel or foreign substance is quickly removed from the screen, and the dies readily changed. Further information will be given by A. Latourette, Waterloo, Seneca County, N. Y., who is one of the proprietors.



FILTRATION vs. EVAPORATION.

That evaporation is a slow and tedious process, is a fact of which the farmer who has undrained retentive soils, which he would plant or sow in good season, is often reminded, and the thought can scarcely fail to arise, that some quicker way of getting rid of the surplus water would be both convenient and agreeable. If it can be shown that a certain remedy for this source of delay has been found, and can in most cases readily be put into operation at a slight expense compared with its beneficial results, surely none need longer suffer from this cause. That draining is such a remedy—that its application is profitable to the farmer—that in nearly every instance the expense is repaid by longer seasons and better crops, let us attempt briefly to prove.

Look at a retentive soil in spring-time—a stiff clay or hard-pan subsoil, for instance. The water then abundant on the surface and saturating the upper soil, must pass off either by drainage or evaporation. It cannot sink or filtrate away—the impervious subsoil prevents—it cannot drain off; the surface is too level and too retentive of water—hence it must remain stagnant until the warmth of the sun and passing currents of air effect its evaporation. And evaporation is not only a slow process, but a *cooling* one—the heat passing off with the vapor—and in proportion to the quantity of water thus passing, will be the loss of heat from the soil. On the same soil, when drained, filtration will dispose of a like quantity of water without any change of the temperature, save to increase that of the undersoil—equalizing it with that of the surface soil—in spring always warmer than the subsoil. It will dispose of it in a few hours—in a very short time after the frost leaves the ground in spring, or after a heavy shower. Filtration not provided for, the much longer time—weeks instead of hours—required for evaporation, shortens the season of preparation, or totally destroys the chance of a crop.

Could the water now making mortar of many an undrained clay, find an outlet or passage *through* the soil, the character of that soil would rapidly be changed. Who has not observed how soon heavy clays become friable when placed where the water freely flows from beneath them, or who can fail to see that a like result would follow the deep and thorough draining of even the heaviest soil. And the evils of stagnant water, or water waiting evaporation, can scarcely be overrated. As said above, it shortens the season of preparation for crops, and it also prevents the proper pulverization and culture of the soil; it causes wheat and other winter grains and the grasses, to heave out and winter kill, and fills lowland meadows with wild grasses and weeds, instead of wholesome herbage.

In ease and extended time of working, in the effect of manures applied, in the increase and certainty of productiveness, and in many other things which we might name, the difference between a porous or well drained clayey soil, as compared with an undrained and hence compact and retentive one, is almost marvelous. And this difference is simply "filtration *vs.* evaporation." In the one, the excess of water has free course through the soil, passing away by the drains without delay; in the other, it must wait the slow process of evaporation—a process leaving the soil more compact than before, and every way less fitted for producing any crop of value.

This difference in the soil "drained, or drowned," as it has been quaintly characterized, is not only observed in early spring, but in the heat and drouth of summer. A heavy soil becomes far dryer and harder from the effect of dry, hot weather than a light one. The porous soil takes up moisture from below, as well as absorbing it readily from the air. Thus a well drained and deeply plowed soil is little injured by drouth—its increased depth of mellow, friable earth gives greater extent to its power of supplying moisture to vegetable growth.

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INFLUENCE OF THE MOON.

We published a few weeks since a few remarks on the influence of the moon on the decay of timber, in reply to a communication in the American Farmer. Those remarks have brought a reply from a subscriber in Kentucky. He says, "I have tried it, and I *know* that hickory cut in the new or light of the moon is safe for ever from the worms; and if you cut it in the dark or wane of the moon, you may dress it out in what shape you please, and the worms will eat it up."

Now we are willing to give our correspondent, who says this is his first attempt, all the credit possible for accuracy; but when he says he has "tried it," and found that the timber is "safe *forever*," we hope he will excuse us for involuntarily doubting his veracity. It is true, we have heard of the man who said "cedar posts would *last forever*, for he had frequently tried it," yet we think he must have been an older man.

We have been so often told of results produced by the moon, in quite as confident a manner as that of our correspondent, which results frequently conflicted directly with each other, that we could not possibly believe them all. On examining further, we found that confident opinions had been either founded on isolated cases; or if a number of examples had been taken, all the exceptions, usually about one half the whole number, were singularly overlooked. We never yet failed to cure any person on whom we tried the experiment, by invariably and repeatedly reminding him of the exceptions only. We cannot see how the sun shining on this or that side of the moon can make any difference, and must therefore ask the privilege of doubting a little longer.

We should perhaps have added that our correspondent says that the time for cutting is just the reverse with *white oak*. "You cut an oak tree in the dark of the moon, and the worms will never touch it." What is the reason of this difference between the hickory and oak? What is the rationale? The light of the sun flies ninety-five million miles and strikes the moon; it shines on it equally all the while; a part of the time we see the shade, and a part of the time we do not; but why this faint shadow more than two hundred thousand miles off, has any more to do with the decay and preservation of oak and hickory timber here in Kentucky, than the whisk of a sturgeon's tail in the bay of Biscay has on the boiling of a tea-kettle at Pike's Peak, we are unable at the present moment to perceive.

[For the Country Gentleman and Cultivator.]

MOLE PLOWS.

EDITORS COUNTRY GENTLEMAN—In your issue of March 1, Mr. Lewis C. Smith, of Mo., inquires, "whose is the best mole plow for draining purposes—the team necessary to draw one a foot or more deep through a heavy tenacious clay soil?"

It might with great propriety be considered that I was disposed to be invidious were I to recommend any one of the numerous mole plows patented from a neighboring county (Madison) within the past two years. The names of parties interested in the manufacture and sale of the plows are Witherow & Co., A. Defenbaugh, Moses Bales, Cole & Wall. The address of all of these parties is London, Madison Co., Ohio.

The beam of the plow ranges from 15 to 18 feet in length, the front end, as well as the rear, resting on a truck; the length of the cutter or coulter is from 4½ to 5 feet; the breadth from 6 to 9 inches. The mole is of various shapes and sizes, ranging from 4 by 5 inches to 5 by 8 inches in diameter and making a drain a section of which is a ⌂ to a circle, and an oval, the shortest diameter of which is the breadth of the drain. Experience has determined that the employment of a capstan is the better method of operating these plows. The capstan is fixed on a frame with legs inclined in the direction of the plow, which (when the power is applied) sink 12 to 18 inches into the earth and hold it firmly in its place; the capstan is 15 to 18 inches in diameter, 2 to 3 feet in height, on the top of which a lever from 15 to 18 feet is firmly fixed; at the extreme end one or two yoke of oxen, or a span of horses is attached to operate the plow, from the front end of which a two inch cable passes to the capstan. This cable is usually 100 feet or 6 rods in length. The draft to operate the plow making a drain 5 by 8 inches in diameter at 38 to 40 inches in depth in a stiff clay is from 250 to 325 pounds—as tested by a dynamometer—the draft of an ordinary plow in loamy soil, cutting a furrow slice of 12 inches wide, and 8 inches deep is 500 pounds.

Gentlemen from Fayette and Clinton counties testified a few days since, before the U. S. Circuit Court in Cincinnati, that one thousand rods of drains could be made in one day with a mole plow, at an expense not exceeeing 1½ cents per rod.

Ten or twelve years ago mole plows, made somewhat alter the style of that of Col. Dickinson of N. Y. State, were used; the mole was a cone not exceeding 3 inches in its greatest diameter, but required three to four span of horses to operate; the consequence was that they trampled the ground in operating it so much that it required several extra plowings to bring it into "good heart" again. In Fayette, Clinton, and Highland counties the Marquis & Emmerson mole plow, which does not materially differ from any of the above named ones, is used to a considerable extent. Mole-plow draining has been introduced into Greene, Warren, Clark, Madison, Union, Pickaway and Ross counties. The soil in many portions of these counties is a stiff clay—drains made by the mole plow three or four years ago are said to be as good as when first made.

After all, the great proportion of arable land in Ohio which requires underdraining, cannot be drained by the mole plow, the substratum not being sufficiently tenacious.

I may as well say a word or two about the progress we are making with tile drains. In Lake county there are two tile drain manufactories, at Cleveland four, in Lorain county two, in Champaign Co. one, and in Franklin Co. (Columbus) one, which have sold all the tile they are able to manufacture during the past season. In the Northern portion of the State twelve new establishments were erected during the past summer and autumn, and which will go into active operation next summer—the demand for tile appears to be unlimitted; before five years we will have one, if not more, tile establishments in every county in the State. The style of tile mostly used is the horseshoe and pipe, from 2 to 8 inches in diameter. JNO. H. KLIPPART.

Columbus, O., March 10. Cor. Sec. O. S. B. of Ag.

[For the Country Gentleman and Cultivator.]

SOILING CATTLE.

Messrs. Editors—I feel constrained to say a few words more upon this subject, although others would do it greater justice. Yet "in the multitude of counsellors there is safety." I will therefore mention a few things which, to my mind, give this system the preference over that of pasturing, and hope some one will "enlarge" and "improve" upon it.

1. *The Fences.*—You are aware, Messrs. Editors, that fences are a heavy tax upon the profits of a farm—the material, and the labor of keeping them in repair, under the most favorable circumstances, amounts to quite a sum annually. But in many localities fencing stuff is getting to be quite scarce, is very expensive, and difficult to obtain, even at high prices; and this evil will continue to increase for time to come. Now, by adopting this method of keeping stock, the greater part of this expense may be saved, as but few fences are required; and not only so, but the land now occupied by them, and also, in many cases, by a variety of shrubs and flowering plants—such as elders, willows, Canada thistles, mulleins, and the like—may be made available in raising valuable crops. This would add much to the appearance of the farm, and the land thus gained for tillage would, in many instances, go far towards keeping the stock upon it.

2. *The Saving of Land.*—I think there can be no question about this. In my opinion one acre of *good* clover will afford as much feed as four acres of the average pastures—corn and sorghum about the same; with millet the difference is not quite so great. There may be other crops that could be as advantageously raised, but these are all that I have tried to any extent. If this be so, it is evident that the stock upon the farm may be greatly increased, or there will be quite an additional number of acres for other purposes. Often two crops may be raised from the same ground—as where rye is sown in the fall, and fed off early in the spring, any other crop may follow it. Early corn may be followed by millet or turnips, and later corn by rye for the following spring, and so on.

3. *It is Better for the Stock.*—Cattle are often turned to pasture too early in the spring, before the feed is sufficiently large to give them a good "bite," or sufficiently nutritious to do them much good; the consequence is, if there happens to be a "dry spell" in the spring, as is often the case, they will be very likely to have short feed through the summer. Of course, they will thrive but little, and will scarcely get over a hard winter's keep, before they enter upon another. When pastured, they are subject to all the vicissitudes of the season—the usual drouth in July and August diminishes, often very materially, the quantity of milk, and checks the growth of young stock. But if soiled, the case is different. Where proper provision has been made for them, they have their food regularly, and all they require, and are in a great measure exempt from the changes thus mentioned. The flow of milk is more uniform—the only diminution being the natural one as they advance in the season, and I think the quality of the milk richer. Butter made from cows thus kept, is decidedly of a better quality, and in hot weather has not that oily appearance so often the case with it at that season of the year. I presume this is owing to the fact that the cows have not had a long drive, it may be, to pasture, and been exposed to the hot sun through the day, and so become heated, affecting their milk. Whatever may be the reason, we have had no difficulty in making butter, in the hottest weather, that would work into nice rolls when it has stood a sufficient time after being salted—this I think an important consideration. We use neither ice or cold water in making butter. (Our butter is furnished to families, weekly, in rolls.) Similar advantages attend the keeping of young cattle in this way—they grow faster, and it tends to make them gentle—if heifers, they become docile and quiet milkers with very little trouble.

I will mention a circumstance that will convey the idea I wish to, perhaps better than I have done it. A friend called upon me the latter part of last September, who has a farm of about two hundred acres, and I think milked at the time 16 cows—we had just passed through a "dry spell"—he said his cows did not average over three and a half pounds of butter a week, while we were making, at the same time, nearly six pounds to the cow. The reason was, his cows were *pinched*, and mine had *enough*.

4. *A Much Larger Quantity of Manure is Made.*—This is the last thing I shall mention, and though last, it is not the least in importance. The manure heap is the farmer's "bank," where he can make his "deposits," and present his "drafts"—his "deposits" must be equal to or exceed his "drafts," else he will be out of "funds." If then the stock may be considerably increased by soiling, he has the means of enlarging his "pile," and thus preventing his "drafts" from "protest."

It should be the aim of every farmer, to make, save, and apply to his land, every thing within his reach that will enrich it—this it seems to me, is one of the great secrets of successful farming; and I am of the opinion, that after one has tried this method of keeping his stock, he will be astonished at the amount of manure made annually, and for this and other reasons, will be quite unwilling to abandon the system.

But as a good deal is said upon the subject of making and applying manure, in the agricultural papers—urging farmers to look to their own interests—it is needless for me to say any thing more in regard to this matter. Every one knows that to raise large crops, his land must be made capable of producing them, and I have no doubt that the soiling of cattle will contribute largely towards producing this result. J. L. R. *Jefferson Co., N. Y.*

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[For the Country Gentleman and Cultivator.]

"FARM IMPROVEMENT."

Editors of the Country Gentleman—On the first page of your paper of Feb. 9, is an article with the above heading, and having some experience in that line, I have concluded to give your readers some of my ideas and some of my experience also. In the first place, I came into possession April 1st, 1853, by purchase, of the old homestead of the Yardley family, which had been in the family since March 21, 1681, with the exception of about four months, viz., from March till June, 1710. The original grant (in my possession,) from Wm. Penn to Wm. Yardley, dated March 21st, 1681, is for "500 acres of land, to be located in the Province of Pennsylvania,"—197 acres of which remained in the family at the time of my purchase. I first purchased 135 acres with the buildings, and some months afterwards purchased 35 acres more, and I then sold ten off, leaving 160 acres, the present size of the farm.

The property had been rented about twenty-three years, and was somewhat out of order at the time of my purchase. On looking about me to see what was necessary to put the farm in the best shape possible, I came to the conclusion that the whole thing needed remodelling. I immediately commenced taking down the inside fences, and laid out the fields anew, so as to equalize the size thereof, and also to bring as many of them as possible to the stream of water, which runs from west to east, through nearly the middle of the farm. I also laid out a new farm road, which began at my wharf on the Delaware Division of Pennsylvania canal, (the canal being the eastern boundary of the farm,) and passes by the barn and by all the fields to west end of the farm, where said road crosses the creek. I have built a large bridge of stone side walls, and covered the aperture for the water with stone, and then continue the side walls on upwards, and the space between I fill with stone which I pick from the fields. The bridge is passable thought not finished, and never will be until raised up to a level with banks on both sides of the creek, and as long as any offal stone remain on the farm and the bridge is unfinished, there is a place to dump them.

In laying out the fields, I first began by setting the two fences which enclose my lawn, so as to enclose also all the farm buildings, thereby enclosing the whole in a plot of about two acres, with the outside fences parallel. I then laid out the fields parallel to the western and northern lines of the farm, and in size about twelve acres, and so arranged that five twelve-acre fields of farm land and ten acres of meadow have running water in them, and a strip of meadow along the creek of about six acres, which is only fitted for grazing purposes. I disagree entirely with Mr. J. J. Thomas in his 7th proposition. I deny that hills should govern the size or shape of fields, or that they should be always plowed down-hill, for by so doing you would soon have the soil plowed down the hill, which if left to the action of the rains, will get off much sooner than I want it to.

In your editorial remarks on the size of fields, you say, "We would propose then, that the *amount of manure* which the farm can furnish, determine the size of the field." I would propose no such thing, but would lay out my fields to suit the farm and system of farming to be adopted, and then work up the manure heap *in some way* to correspond therewith.

And now, Messrs. Editors, having got my stakes set for the new fences, I commenced overhauling and assorting my rails. I first selected all the large rails suitable for a four-rail fence, and put them on a bank along a public road. I then took all the straight and small ones and put them along the farm road. I then took the same size but of a rougher quality, and put them on the line between me and my neighbors; and lastly, I took all the most crooked ones and put into the division fences. All my line and most of my division fences are five rails high, and nearly all of best chestnut timber, and put together by an experienced fence-maker, who I consider an adept at the trade.

And now, having got my farm fenced, I will give you some idea of the natural lay and quality of the land, and my plan of farming it. To begin, I would say that the soil is a brown sandy loam, well adapted to all kinds of grain and grass, the stone in it being brown sandstone, with an open gravelly underlay, considerably rolling, and therefore needing little underdraining.

The fields have formerly been plowed in lands of different sizes, and both ways, thereby creating artificial inequalities in the soil, and the water driven into bodies so as to wash many of the fields badly into gullies of more or less extent. I immediately commened a different system of plowing, for I felt satisfied that unless some other system was adopted, my farm, with all the manure I might put upon it, would wash off on to somebody else, or into the Delaware.

I first commenced the smoothing system, by plowing the old lands to their proper level, and then if the ground was not in pr0per shape, I used the shovel and cart and hauled the hills into the hollows, and have thus moved nearly four thousand ox cart-loads of dirt in seven years. In moving dirt I sometimes use a board about eight feet long and six inches wide, set edgewise under the hind part of a triangular harrow, and then with an engineer to manage the horse and two men to manage the harrow, a field of ten or fifteen acres may be smoothed down in double quick time.

Having got my field smooth, I endeavor to keep it so. Sometimes in plowing for corn, I begin at the fence and plow around the field outward until finished, and then haul the outside furrow and fill the corners and middle "clear up." Last spring I sowed my oats on the corn stubble without plowing the ground at all, (having first cut away the cornstalks with a hoe when the ground was hard frozen.) I first sowed the oats and then harrowed the ground three times, and rolled it down, and had plump fifty bushels of oats to the acre, the uniervsal prediction of the knowing ones "to the contrary notwithstanding."

In preparing my field for wheat, I first put on the manure, and plow the field into large lands, say thirty or forty paces wide, and then plow them back again for seeding. I always endeavor to destroy all signs of vegetation inside of my fences before putting in my wheat, and my method of doing it is to plow the oat stubble from the fence on all sides, and by putting a single horse to a plow, I can plow within six inches of the posts. I then take a sharp spade and go on the other side of the fence and turn the back to the rail, and cut all loose under the fence, and let a man follow with a potato rake and pull the dirt and trash into the oatfield side, where the harrow will effectually exterminate it. This method effectually destroys the mole and mice harbors, and does away with the old system of raising a fringe of noxious trash around the fences, to be sown broadcast over the field by every blast that blows. Lastly, in preparing the field for wheat, I plow and scrape the dirt all down to an even surface, that is, an equal depth of soil all over the subsoil, and fill up all the pie-dishes that may be in the field—then harrow the field well, and pick all the stone off, and then roll it down by running the roller as close to the fences as possible —drill in my wheat and timothy seed, (some time from the 1st to the 15th of Sept.,) and follow the drill with a light one-horse harrow; then pick the stone again; and then roll down the field in the most complete manner, drive out the team, and put up the bars or shut the gate.

And here, Messrs. Editors, I might also observe that I sow nothing but the best of seed, and never let a noxious weed go to seed if I can possibly help it. In conclusion I will only say, "He that knows better how to 'tame a farm,' why let him teach—'twere charity to show."

Prospect Farm, Bucks Co., Pa. JNO. KELSEY.

P. S.—I find on looking over the above article, I have forgotten to say anything of the amount of stone I have removed and the manner of doing it. In plowing any other than a sod, I place a grubbing-hoe axe downward in the coulter-hole in the plow beam, and then say to the plowman, take out every stone of sufficient size to disturb the plow, and if he finds any too large, I have him mark the place, and take them out afterward. By this method I cleaned nearly all the farm of stone—in all some 300 or 400 perches, nearly all of which are first-rate building stone, and many of them so large as to require blasting before they could be removed—in addition to all of which, I grubbed innumerable loads of briers and elders from along the fences.

In a communication I wrote you some days ago, I believe I omitted the finishing stroke on my wheat field. It is this: After the last harrowing, or perhaps during its progress, I pass round the field with a garden rake, and push the dirt back under the fence, and smooth it down nicely, so as to give the scythe a fair chance; and then after drilling my wheat, I take a pan of timothy seed, and go round the field, and sow the ground along and under the fence; then follow with the rake, and rake the seed in, and break up the clods that the roller cannot reach. The next spring I sow clover seed around the fence in the same way. Thus you will perceive that when I come to mow the field, I have hay about the right stripe.

Bucks Co., Pa. JNO. KELSEY.

PROFITS OF FRUIT.

The New-England Farmer states that the Northern Spy apple now sells for fifty to seventy-five cents a dozen at retail in the Boston market. This remark of course applies to those only of fine quality and well kept. Fruit that is better than the average will always bring not only a high price, but will also command a ready sale. The Northern Spy is one of those fruits that will always show the effect of good treatment, and those are the sorts that afford the highest profits under skillful hands. It has been objected to this apple that it is hard to convey to market, on account of its liability to bruise. This is the very quality that gives it its high value in selling. A half a day's labor in extra pains in packing, will repay the cost of a week's labor in putting up. It is the difference in the results of common and skillful management, in raising, gathering, ripening and packing that gives such great prices to the finest pears. Farmers! if you wish to make money by marketing fruit, pursue such a course as will enable you to exhibit specimens, finer in quality and more splendid in appearance than those around you, and you can command almost whatever you choose.

SEEDING DOWN WITH OATS.

EDS. CO. GENT.—The first numbers of the Co. Gent. are at hand, and to say I am *pleased* with their contents would be a small word wherewith to express my satisfaction. As I look over the nicely printed pages—the observations and experience of practical and thorough farmers—all brimful of instruction, my only regret is, that I had not long ere this been a subscriber to its valuable pages.

Allow me to couple the above with an inquiry. I have seeded down, after oats, for two seasons in succession, an eight acre lot, the first season with clover, the second with clover and timothy, and each time it has proved a failure. The soil is well drained, and consists, for the most part, of a black mold with a gravelly clay subsoil. The oats have been good each season, yet marks of seeding could be seen only in spots. The grasshoppers have been pretty thick at harvest time in the field, but still it was not attributed to them, as I inferred that they would have left *no spot* untouched. The lot has not been seeded down for a number of years—been under the plow each season. If you, or some of your numerous correspondents, will suggest some remedy for this case you will confer a favor. AGRICOLA.

Genoa, N. Y., 1860.

Seeding down with oats is rarely successful. If the oats are poor the grass may succeed—but on good soil, that will bring heavy oats, and which should grow good grass, it usually fails. There are two modes which our correspondent may adopt. The first is to sow the grass seed (double the usual quantity) early in the spring, on the land which he has prepared for the oats, with no other crop, and brush it in. If sown quite early, it will be good pasture before midsummer. We have cut about two tons to the acre under favorable circumstances, the same year. The second year the grass crop will be all he could wish. The second mode is to sow oats alone, and after harvest to plow the stubble, and sow and brush in the grass seed. The grass crop next year thus treated will be much better than it could be if the seed was sown with oats in spring.

[For the Cultivator and Country Gentleman.]

CORN FOR A POUND OF PORK.

MESSRS. EDITORS—How much corn does it require to make a pound of pork? With a wish to obtain a correct answer to the above question, I made an experiment in the fall of 1857, and now give you the result.

On the 28th of October, I weighed a pig which was about six months old—the weight was 145 lbs. I then fed it ten days and weighed again, Nov. 7th—the weight was 175 lbs.—gain, 30 lbs., and it had eaten 96 lbs. of corn. I then fed corn-meal fourteen days, and weighed again Nov. 21st—the weight was 211 lbs.—gain, 36 lbs., and it had eaten 145 lbs. of meal. I then fed on corn seventeen days, and again weighed Dec. 9th—the weight was 263 lbs.—gain, 52 lbs., and it had eaten 216 lbs. of corn. I then fed till Feb. 1st, 1858, fifty-four days, and weighed again—the weight was 311 lbs.—gain, 48 lbs., and it had eaten 445 lbs. of corn. It was butchered that day, and weighed dressed, 262 lbs.

I was disappointed in the result all the way through; the gain on the first feeding of corn, was far beyond my expectation; then the gain on meal was *less* than I expected, as I had often heard it said that pigs would gain faster on meal than they would on corn. Then again, the gain on corn after the meal, was more than I expected; but the gain on the last trial was very much below my expectation, and unaccountable by me.

So far as the experiment extended, I do not know how it could be conducted with more accuracy. The drink was water, in a trough separate from the feeding trough, so that the food was taken dry.

I would add, that in 1858, Sept. 24th, I weighed a pig, to see how much he could be made to gain in twelve days, (previous to a fair which was to be held.) His weight was 104 lbs. At the expiration of the time he weighed 145 lbs.—gain, 41 lbs., or nearly 3½ lbs. per day. He ate 70 lbs. of corn, and 16 lbs. of rye bran mixed with skimmed milk. In both cases the pigs were fed as much as they would eat, a few days before weighing, so that there should be no "filling up," as it is called, to take into the account.

From these experiments, in connection with Mr. Proctor's statement in the Feb. No. of the Cultivator, page 65, and with some observations that I have made at other times, I am of the opinion that it is much easier making pork in the summer and fall months than it is in the winter months. MARCUS E. MERWIN. *Litchfield Co., Conn.*

[For the Country Gentleman and Cultivator.]

HOW TO CLEAN SEED WHEAT.

MESSRS. EDITORS—The following mode of cleaning chess and smut from seed wheat, I have found to effectually prevent transmutation, and the benefit to the crop will pay the expense.

Take a barrel and fill it half to two-thirds full of brine, strong enough to float a potato—pour into it one bushel of wheat—skim off all that floats—stir and turn up the wheat—skim and stir it again and again, as long as any thing rises. After skimming all you can get from the brine carefully off, (so as not to agitate the wheat,) in a tub, there will be some chess missed by the skimmer—be careful to make it all run off with the brine. When the wheat begins to come, place your hands or some screen before it, that will hold it back, and allow the brine to drain off. When drained, empty the wheat on the floor, and mix in it lime enough to dry it, so that it will not stick together. Pour the brine in the barrel again, put in another bushel of wheat, and proceed as before.

By this method all the chess can be got out, and if there is none in the ground, the operation will not require to be repeated the next year.

There is usually some chess in Timothy seed. If it is sown with the wheat, sift it through a meal sieve.

Chess will grow with grass from year to year. I have seen it in the grass that was mowed three or four years in succession, and it increased every year. G.

Poughkeepsie, N. Y.

[For the Country Gentleman and Cultivator.]

CULTURE OF THE RUTA BAGA.

MESSRS. TUCKER & SON—As this is a good time to make calculations and lay plans for summer, I propose through your excellent paper, to inform my brother farmers how I raised ruta bagas quite successfully last season. A piece of pasture ground, which was so badly run out that it produced next to nothing, was taken for bagas. It was plowed about ten inches deep, harrowed well, and furrowed out with a light one-horse plow. Compost manure composed of night soil one part and surface soil four parts, well mixed, was dropped in hills in the furrows two feet apart, at the rate of one shovel full for three hills. It was covered lightly with earth by the hoe, and seed dropped by hand and covered by hand hoe. The rows were three feet apart, and it was designed to have two plants grow in a hill, but in planting we covered some of the seed too deep, and it did not come up; but what grew were very large and fine, and had the ground been fully stocked the yield must have been very great.

The advantage gained by this plan is that it costs but little labor to tend them, (which always comes in a very busy time of the year,) and requires but little manure. We cultivated twice with a horse and hoed twice by hand. But, says some of the brotherhood, ruta bagas are an exhausting crop; little or nothing will grow after bagas. Such is not my experience. If the crop is fed, and the manure returned to the land, apply what crop you please, and you will find your labor rewarded by a bountiful crop. But if one prefers he may grow bagas for a number of years in succession on the same piece of ground. I hardly know how one can get so much feed in any other way. By feeding the crop and saving all of the manure, you will keep up the fertility of the soil without requiring the proceeds of any other crop, and most likely have a surplus of manure left. A neighbor of mine, and he quite a successful farmer, has had them on the same piece of ground for the past four years, and the crop of 1859 was much the best, though it has produced an excellent crop each year, although but lightly manured. Last year he manured better, applying 25 or 30 two-horse loads to the acre, of good stable manure. The same ground was set to apple trees four years ago, and they are doing nicely. He intends to continue the crop on the same land so long as it continues to improve. M. S. K.

Chicopee Falls, Mass.

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[For the Country Gentleman and Cultivator.]

A Sure Remedy for Lice on Animals.

It is really amusing, but not very instructive, to read the ideas of different men with regard to the manner of treating lice. One will recommend one nostrum, and another something else equally inefficient.

Why do lice flourish best, and increase much more rapidly, on very poor, emaciated animals, than they will on fat animals? Because the surface of the skin and the hair of fat animals is somewhat oily, while the skin and hair of very poor animals is quite free from oil. Well, what of that? Why nothing, only no lice can ever propagate their species among oily hair; and whether they have any brains or not, they will never deposit their nits among oily hair. If the nits after they have been deposited, or stuck to the hair, should be oiled, they will never hatch; and the lice seem to know that fact, and therefore they do not find a congenial locality in the hair of an animal which perspires very much. Consequently if lice are formed on a *fat* animal, they will always be more numerous near the end of his tail than on any part of his body. Lice are very like sheep in one respect, they like a warm and dry place.

Let a few nits be placed in a warm place for a few days, and they will hatch; but let them be *oiled*, and it will be impossible to hatch them. So with the eggs of birds and domestic fowls; give them a good coat of paint or grease, and they will never hatch.

The bees, which are such a great annoyance to horses in the summer, which fasten their eggs to the hair of horses, seem to understand this principle much better than most people do, and therefore they deposit most of their eggs on the hair, which will be least liable to be moistened with sweat. For this reason we always see many more *bot eggs* on the legs, below the knees of horses, than on any other part of them. If such eggs should be *greased*, or moistened with sweat a few times, they will never hatch.

There are several very good remedies for lice on animals; but among them all, perhaps, *oil* is the most efficacious and harmless. None but sweet oil, or the best kind of lamp oil, or winter strained machine oil, should be used for such a purpose. If linseed oil, or some other kinds of oil be used, it is liable *to dry*, and the hair of the animals will all stick together in dry, hard bunches. Pour it on their backs, and on their necks and tails, and rub it in thoroughly; and if lice take up their quarters on the dewlap, give *it* a good oiling, and they will soon bid adieu to such oleaginous climes. Oil should be applied when the weather is *warm*, rather than when it is very cold; because in very cold weather lice keep very quiet, and do not deposit many eggs. Let it be kept in mind that they never deposit their eggs on oily hair.

In the spring of 1859, we were raising a lot of turkeys which were about as large as quails, when they began to droop, and appeared very lifeless. Upon examination they were all found to be as lousy as an Egyptian. Every one of them was caught, and sweet oil was rubbed on their heads and *poured* on them, under the wings—giving them a good sopping—and in three days not a louse could be found, and the turkeys soon began to flap their wings and move about with agility.

Mercurial ointment or "*unguentum*," which is made of mercury mingled with lard, is often recommended for lice. But it is a very dangerous remedy; and is no more efficacious than oil. I applied mercurial ointment once to my calves, which were lousy; and it made them so sick, that I feared, for some time, I should lose them. Such a remedy never should be used, when there are enough besides, of a milder character.

A decoction of tobacco is frequently recommended for destroying lice. But oil is much cheaper and more efficacious, and will not make animals sick; but tobacco, when applied very bountifully, will often make them sick.

Fowls roll in the sand in order to mingle it with their feathers, which will *scratch* the lice to death; and cattle frequently throw dirt on their backs, which destroys the lice *mechanically*, just as scores of people are smashed up among the rubbish of a huge building when it falls. But it is very difficult to make sand or ashes remain among the hair on the dewlaps of animals, or on their sides; therefore *oil* seems to be preferable to almost any other remedy-

Fat catttle will *sometimes* be covered with lice. I once owned a yoke of very fat oxen, which were the lousiest beings that I ever heard of; but a good sopping of oil soon dispersed them. Keeping animals in a thriving condition is usually a good preventive; but it will fail sometimes as a remedy. S. EDWARDS TODD. *Lake Ridge, N. Y.*

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[For the Country Gentleman and Cultivator.]

HAY CAPS.

MESSRS. EDITORS—This is a very useful article in haymaking, although a little out of season just now—but it is the right time to make or procure them, that they may be in readiness when wanted. The use of hay caps has not as yet become general, but the time is not far distant when every progressive farmer will have them, and consider them about as necessary as any farm implement.

Three years ago I made one hundred caps, one and a half yards square, of heavy cotton cloth. They were made by sewing half a breadth to a whole one of the desired length. To fasten them on, I first tied stones in the corners, but they would blow off, and were ugly things to handle—then I sewed strong twine to the corners, with pegs attached, but in high winds the corners would pull or tear out after a while. Finally I tied a knot in the corners, leaving the end sticking out about an inch, so as not to slip or untie, and fastened the cord by tying it back of the knot, and found this to work well. The strain then comes upon the whole corner, and not upon a small section, as when sewed on. There is a little knack in putting caps on so that they will "stay put." The pegs should not be run *straight* into the cock, but *pointing up* at an angle of about forty-five degrees; then the working of the cap by the wind will not draw them out; and the cap should be drawn down snug when the last two pegs are put in. If thus put on, not one in a hundred will get loose, and the cock cannot blow over.

But my hay caps called forth various and often ludicrous remarks, when first brought into the field—many looked askance at them, and thought it useless to "blanket" hay, besides any "gump" might now that water would run through cotton cloth. One individual who first saw them at a distance, and really did not know what they were, (they were all in use in one field,) concluded it was the encampment of a general muster, or of an invading army—didn't know which. However, I was so well pleased with them, that I added fifty to the number the next season, and also made two twelve feet square, to cover stacks and think the money well invested. J. L. R.

COUNTRY RESIDENCE AND VALUABLE FARM FOR SALE,

Known as the "COLDEN MANSION FARM," situated in Coldenham, Orange Co., N. Y., 7 miles west of Newburgh, on the Newburgh and Cochecton Turnpike.

The House is 50 feet square, two stories high, basement kitchen, and built of stone. There is a large Farm House and Tenant House also on the place, together with Carriage Houses, Barn, Hay Houses, Granary, &c., &c. A fine Apple Orchard—also a great variety of the choicest kinds of Fruit Trees in full bearing.

The Farm contains 217 acres, mostly under a high state of cultivation, and is as healthy a location as can be found.

At least one-half of the purchase money may remain on bond and mortgage for a term of years.

For further particulars apply to Judge JOHN J. MONELL, Newburgh, L. MURRAY FERRIS, jr., 62 South street, New-York, or to the subscriber on the premises. LINDLEY M. FERRIS.

Mar 8—w6tm3t

[For the Country Gentleman and Cultivator.]

MILLET FOR FEED.

Eds. Co. Gent.—Last winter I wrote you, giving a brief statement with my first trial in raising a crop of the German millet. I was so well pleased with it, that last spring I fitted the ground, and sowed fifteen acres. The ground was plowed about the middle of June, well harrowed, and sowed a little over a half bushel of seed to the acre—again harrowed and rolled, finishing the work June 22d. On the 20th Aug., making sixty days after sowing, I mowed it with a machine; being very thick on the ground, it required two days to cure. Then raked with a horse-rake and cocked. The ground was very uneven. The highest and dryest produced the heaviest growth. On about two acres of the lowest ground, but little grew, being too wet. Some of the heads grew over seven inches in length, and yielded over a tablespoonful of seed. The entire crop on the fifteen acres was sixty loads, as heavy as a span of horses could well draw. I estimate the crop at sixty tons, or four tons average per acre.

I have fed 20 horses (old and young,) and 20 cows, thus far with no other feed, and have enough on hand to last until the 10th of March.

I have a large barn floor on which I put enough to last two days. Put on the horses, and about two-thirds thrash it. It is all fed in stalls and mangers. My horses and cattle eat it readily, and are in better flesh than they ever were at this time of year. Several times I have put a lock of millet and a lock of the best tame hay into the horse manger. The horse would invariably eat the millet first.

A team that works every day, requires about half the grain if fed on millet it would if fed with hay. I have a stack of it in my calf-yard, allowing the calves free access. If you were to see them cut their pranks when let out to water, you would think they had "pretty good keeping" at least. I will here remark, that I wintered fourteen calves last year, fed wholly on millet, and never had a lot in better condition in the spring. The butchers tried to buy them for their market stalls.

One of my neighbors last spring tried to raise two crops in a season by sowing the first in April, and again after the crop came off. He failed in both. The 20th June is about the best time to sow the seed. It is often the case that some of the farmer's crops fail, either by poor seed, heavy rains, drouth, or frosts. If in such cases a little millet seed was on hand, he could in a great measure repair the loss. If the farmers in Central or Western New-York, or any where else where the frosts of June last cut off their corn, beans, potatoes, &c., had sown the desolate ground with millet, they would now have something good and cheap to feed their stock with.

Why the name of *Hungarian grass* should be given to a variety of the millet, is to my mind a query. If a Hungarian emigrant introduced into Iowa a millet seed producing a round head, requiring to be sown each and every year to produce a crop, how can it be called a grass? It does not stool or sprout out after harvest, and produce an abundance of fall feed as some have stated. At least I have seen no after growth as yet. There is no such thing as grass about it. It is Millet, nothing more nor nothing less. It is wrong to class it in your market tables as Hungarian grass seed, or Honey blade, or any thing else than Millet. There is a little difference in the shape of the head. So there is of wheat or barley. C. G. T.

Rock Island Co., Ill., Feb., 1860.

Fatal Disease among Cattle in Massachusetts.

A very destructive disease is raging among the cattle of North Brookfield, and neighboring towns in Massachusetts. None of the animals attacked with it have recovered. The disease first appeared last summer, in a calf of foreign breed, leading some to suppose it is an importation of the pleuro-pneumonia of Holland. The first animal upon which the disease appeared being one brought from Holland to the farm of Mr. Chenery, of Belmont, where cattle are also dying in great numbers—but the sale of the calf, and its transfer to Brookfield, was the occasion of the appearance of the disease in its most virulent form, at the latter place, and with, at present, greater destruction. No less than fifty head of valuable cattle have died, and many more are beyond recovery. Inquiries are being made by the farmers of all who can be expected to suggest any relief. Dr. Dadd addressed some of the citizens of North Brookfield a few evenings since, after examination of the diseased animals, one or two of which had been killed for the purpose, in different stages of the progress of the disease—the offensiveness of it in those which had died naturally, being overpowering. He thought it infectious, but not contagious—believed it to be pleuro-pulmonia—differing from the pleuro-pneumonia of Holland, in its not assuming a typhoid form in our climate. In some cases examined, the lungs were putrid, having mortified. In one instance the lungs were compressed to one-fourth their natural size; in another filled with nearly a pailful of foreign substance in the form of colored serum. The only symptom was a deep seated cough. No remedy could be devised but to isolate the diseased animals and have them killed—this could be done by direction of the Board of Agriculture—the State paying for the loss, as was uniformly done in Europe in similar cases.

Immense numbers—amounting to millions—of cattle have been lost by this disease in Europe. The governments of France and Holland have offered large rewards for a remedy, but none has yet been discovered. Inoculation has been found a preventive, and in localities where sixty per cent of the cattle used to die of this disease only one per cent die since vaccination has been tried. The process is described as follows:—

"This inoculation is done near the end of the tail. The hair is clipped off, the skin cleaned, and two incisions made with a lancet, into which the virus is introduced. The virus must be obtained from the lungs of a cow suffering with the disease, and killed for the purpose, and not from an animal that has died in the natural way from the effects of the disease. The manner of obtaining it is to cut off a portion of the lung between the healthy and the infected parts—the part marbled like water and blood is wrung out into a vessel and allowed to stand one day, when the the bloody part will sink to the bottom, and a lemon colored liquid will remain upon the surface This, *if free from scent*, is fit for use, and may be preserved in a vial. In cold weather it will keep eight or ten days before becoming too corrupt for use, while in warm weather it will hold good only one or two days. The drops introduced into each incision will produce, in a week or fortnight, and in some cases a longer time, a pock quite similar to that caused by the inoculation of persons with the cow pox. When no pock appears it is presumed that the animal is not susceptible to the disease. When the tail of the animal becomes much swollen, an incision is made, in order that the infectious matter may run out, and the wound is from time to time cleansed with water."

☞ Since the above was in type, and too late for this week, we have received an interesting letter from a Massachusetts correspondent on this subject, which will appear in our next.

Large Pumpkin.—I send you a few pumpkin seeds. The original one was sent me last winter. The result from the vine, one pumpkin, which measured 3 ft. in length, 4 ft. around it, and weighed 80 lbs. The skin was perfectly smooth—color a delicate yellow with a few white streaks. I kept it until Christmas. It proved to be the finest for pies we had ever tried; I do not know the name. I would like to hear, through your paper, the result of these seed, and name of pumpkin. G. R. Duer.

Burlington Co., N. J.

Inquiries and Answers.

Draining wet Woodland.—What will be the effect of draining upon a native growth of maple, ash and hickory, growing upon a heavy wet soil, sloping to the west, with hard-pan from two to three feet below the surface—the draining to be sufficient to convert the adjacent land on the lower side of the grove, to gardening purposes? A Subscriber. [The *old* trees will probably be injured by the operation—the younger not. We have seen swamp forests, consisting chiefly of black ash, mostly killed by draining the swamp. The injury would be less with common upland trees growing merely in wet spots—possibly no injury in the present case might be the result, as the change would be much less severe than in draining flooded swamps.]

Grapevines from Eyes.—Please inform me if I can start *grapevines* from the eyes, in a small box of one pane of glass, placed over a hot-bed or in the open ground. P. M. [They need some bottom heat, and will start in a hot-bed.]

Plans of Farm, Barns, and Outbuildings.—[Thomas Bell, Elizabeth, Ill.] Plans of farms will be found, with several illustrations, in the Register for 1857 and for 1859. Designs for barns have been published in the Register for 1856, and for outbuildings in that for 1858, and for good farm houses in 1857, and in other numbers. If water is difficult to obtain, large rain water cisterns will furnish water to stock, if collected from all the barn roofs, and kept in reservoirs of sufficient capacity, or enough to hold at least 25 or 30 barrels of water for every ten feet square of roof.]

Poultry Yard.—How large will a poultry yard need be for 50 hens, and how made to have it cheap and durable? W. P. [We have never had an opportunity of testing the proper size, as we allow our fowls the range of the barnyard, orchard, &c. A fourth of an acre would probably be the smallest admissible dimensions—half an acre would be better. A high picket fence is commonly used. Some breeds, as the large eastern sorts, need very little fence, as they cannot fly much. Our white shanghais will not pass over a picket fence four feet high.]

Peas and Buckwheat for Cows.—Will it pay to mix peas at $1.50 per bushel, with oats at 44 cents, and buckwheat at 50 cents to feed cows? W. P. [It must depend on the prices obtained for their products. Peas are more than double the value of the buckwheat for feeding weight for weight, and about one and a half times greater than oats. The latter would probably be rather the cheapest food of the three, at the above named prices—although the experiments which have been made differ considerably in results. They would be about equal to hay at $12 or $15 a ton. Different animals, different modes of feeding, and difference in the quality of these substances, prevent accurate estimates.]

Corn after Peas.—Will corn do well after Peas? A. B. [Yes; especially if a good coating of manure is given to the land before planting.]

Plowing in Clover.—Which is the best time to plow in clover—when it is in full bloom, or when nearly ripe? Will it do to plow it in in summer, and sow it with wheat the next spring? C. D. [About or soon after it is in bloom. It will do for spring wheat if the clover has been turned deeply under with a flat sod, and the inverted sod subsequently made mellow by shallow plowing afterwards.].

Specific Gravity of Milk.—What is the standard weight of milk, if any, and is rich milk heavier or lighter than poor? B. F. B. *New-Jersey.* [Milk is heavier than water; if the specific gravity of water be taken as a thousand, milk will be on an average about 1031. It varies greatly in different cows, and even at different times from the same cow. A feeding of salt, says Flint, has made the milk of a cow vary from one to three per cent. Cream is lighter than skim-milk, and very rich milk therefore lighter than poor. Rich milk and water therefore resemble each other in weight—hence adulterations by water cannot be detected by the hydrometer.]

Cellar Bottoms.—In No. 8, J. C. R. queries about cellar bottoms. I suppose hydraulic cement would be good, but I have always found common mortar, not made very rich, *good enough*, just on the bare ground—say three or four inches thick, and carefully pounded down until it becomes dry. The process is so simple and cheap that no one who can procure a few bushels of lime and sand, should permit either rats or mice to frequent their cellar. Don't think of employing a mechanic, but straightway mix up a bed of mortar—clear everything off the floor, and if not level, level it—spread the mortar, provide a block about one foot square and six inches deep—insert a handle, and as soon as you see a crack pound down, and as long as it cracks continue to pound. The process is not lengthy, but requires attention while drying.

J. Cope.

Buggy Peas—Query.—Last fall my father and mother were shelling peas. [illegible] mother's attention was called away, and she got up, unthinkingly, throwing about a quart of the peas in a tub of cold water. On that account they were put away separately. At the present time the ones that got in the cold water are perfectly free from bugs, while hardly one of the others escaped. Will cold water have that effect?

Rhode Island. Jos. M. Wade.

Cattle Nibbling their Mangers.—I would like to inquire through the Cultivator the cause of cattle nibbling the manger and other boards within their reach, while tied in the stable. Is it a disease, or is it a lack of something in the soil, thereby rendering the hay deficient of something that is necessary to the health of the animal? My impression is the latter, as the land has been rented a good deal and pretty well reduced. If you or any of your readers can answer this and prescribe a remedy, you would much oblige

A Subscriber.

Quick Manures.—A correspondent at Bridgport, Montgomery Co., Pa., wishes to know the best and cheapest manure for a final crop of corn on a piece of land devoted to building purposes in future—the manure being of no value after the present year. In answer, we would say that if guano and superphosphate have already proved valuable for that region, they may be employed, provided common manure is scarce or high-priced. But as the soil is sandy, a large portion of barn-yard manure if applied, would be available the first year, especially if very finely pulverized and mixed with the soil down a few inches. The land being sod, turn it over in spring about six inches deep, mellow three inches of the top surface with a Shares' harrow, which will at the same time turn under partially a moderate coating of fine manure. Manure in the hill also; cultivate with a horse at least once in two weeks till the corn is too large, and we would rather trust the common manure, if not too costly, than anything else. If a Shares' harrow cannot be had, plow as flat as possible, lay the sod flat, roll, harrow, and turn under the manure with a gang-plow—which after all, may be the best way.

Soft Soap for the Borer.—Dr. Fitch stated in his lecture at New-Haven, that soft soap is an unfailing remedy for the apple borer. Is the soap diluted and applied as a wash to the trunk, or applied round the root in an unmixed state? A Young Farmer. *Morristown, N. J.* [The soap will not kill the borer after he has entered the wood—but will exclude the eggs. It should be just thin enough to form a good coat over the bark—some soft soap is already diluted enough for this purpose, while other needs the addition of more or less water. Scrape the earth away somewhat from the foot of the trunk, and coat the bark, as high as the borer is ever found. The rains will wash it down sufficiently to cover all the exposed bark, if any is not supplied. The insect does not like to lay her eggs in the soap. It should be applied early in summer, and be repeated once more in a few weeks, according to the amount of rain which may have washed it off.]

Cottage Roofs.—Can you tell me how long the rafters of a house should be, in order to have hanging eaves, and a good pitch to the roof, the post or studding being 12 feet. Is this too high posted for a country cottage, where good chambers are desirable? The site is quite romantic, and I wish to know if the roof, to harmonize well, should be flat or steep? How high should the lower rooms be finished? An answer to these queries will greatly oblige A Reader. [A flat roof has some serious disadvantages—a prominent one is its liability to both leakage and rot, if covered with shingles. The snow is less apt to slide or blow off, and there is less garret room. As our correspondent has not given the dimensions of his intended house, we cannot give the measurements he desires, as much depends on the relative breadth as compared with the breadth of eaves, pitch of roof, &c. There are very few houses the eaves of which should not project two and a half or three feet, often more. An ascent of one foot for every foot and a half horizontal, is as flat a roof as should ever be adopted with shingles, that is, if the house is 30 feet wide, it should be ten feet higher at the peak than at the eaves—a better slope is one of 45 degrees. Steeper than this does not look well, except for cottage Gothic, which may be as nearly or about as high as its whole width.]

Use of Manure.—How would you advise me to use the manure from one horse and about twenty sheep, it having been put together and kept under cover all winter? Young Farmer. [If there is little or no long litter in it, it may be applied to land in spring, by spreading it evenly over the surface, breaking it up finely and mixing it with the top soil by thorough harrowing before plowing it under. If there is so much long stuff with it that it cannot be treated in this way, draw it out to the side of the field where it will be ultimately wanted, and make it into an oblong pile with thin alternate layers of fence-corner turf, loam, ditch washings, &c., and then let it remain a few months, until completely rotted. If the pile is long and not high, it may be easily and thoroughly pulverized and mixed together by means of a plow, harrow, and a yoke of oxen—and will then be in admirable condition to apply for fall crops of any kind, or for other purposes.]

Underdraining—Top-Dressing.—Seeing that you take some notice of inquiries, I would like to ask a few questions in regard to our soil—1st, whether underdraining would be necessary—2d, whether top dressed with manures or plowed under would be best—the soil being sandy loam and sub-soil clay, no stone of any kind in the way of the plow, and pretty hilly at that; so much so that but little water stands any length of time on the surface. J. H. *Washington Co., O.* [We repeat the simple rule to determine whether underdraining is necessary—namely, to dig holes in various places two and a half feet deep, and if the water stands in these holes several days during the wetest time of the year, the ground should be underdrained—if on the other hand the water when it falls into these holes immediately passes off through the porous subsoil, draining would be of no use whatever. Plowing under manure is always best on light soils Top-dressing pastures or lawns which we do not wish to plow, if done in autumn or winter, so that the soluble parts of the manure will be carried by the early spring rains into the newly thawed porous surface, will be of much use—but the most so on heavy or clayey soils.]

Root Crops.—Will you please inform me through The Cultivator the best kind of root crop for stock? What time to sow—how to plant out, and what time to harvest them—the cost of seed for half an acre, and where I can get it. Christian Trauger. *Pleasant Unity, Pa.* [Carrots and Ruta Bagas do best on light soils; for carrots the soil should be deep. Mangold Wurtzels and Sugar Beets succeed well on strong soils. The land must be very rich. Ruta Bagas cannot be used for feeding milch cows, as they impart a turnip taste to the milk and butter, but carrots and beets are both excellent for them; the beets are perhaps best of the two, to promote a free flow of milk, but they must be given cautiously at first. Carrots make very rich milk and yellow butter. The seed should be sown as early in spring as the ground can be made ready—it must of course be mellow and fine. There is no transplanting—the superfluous plants must be thinned out. The weeds must be never allowed to grow 2 inches high. Half a pound of ruta baga seed will plant half an acre, and will cost 50 cents—2 pounds of carrot seed or of beets will plant the same, and will cost a dollar or two. They can be had at the seed stores in large towns, and our correspondent could undoubtedly procure them at Pittsburgh. We should, perhaps, add that a planting machine is almost indispensable as a labor saver—but in its absence, the labor of dropping by hand may be greatly facilitated by nailing a tin cup, to hold the seed, to the lower end of a stick 2 feet long, and making a hole in the bottom just large enough for the seed to fall through as it is held over the drill and shaken as the operator walks along.]

Propagating the Blackberry.—I would like to know how to propagate the Lawton Blackberry, so as to get the most plants in one season. Is there any difference between the Lawton blackberry and the New Rochelle, or does the Lawton go by any other name? Can you tell me the cost of the bushes? William Rhodes. [The New Rochelle blackberry is the true name of the sort called Lawton. The sorts are precisely the same. They are propagated by placing pieces of the root under the surface of a rich mellow soil, and giving them bottom heat in a hot-bed or propagating house. They also propagate themselves by suckers. The plants are sold by nurserymen generally at $5 or $6 per 100]

Diseases of Horses—Will you inform me through the Co. Gent. of the title of the best work on the Diseases of Horses, and where it can be had? I want a work that will give me a full description of the diseases they are subject to, and the remedy. J. C. M. [We know of no better work than Dr. Dadd's "Modern Horse Doctor," which we can send you postpaid for $1.25.]

Draining Side-Hill.—I am about making some side-hill ditches on a piece of ground on which I shall plant fruit trees. I would thank you most kindly, if you will tell me how much fall they should have, the distance apart to put them, &c., &c. E. C. S. *Va.* [Cut the ditches directly down hill by the shortest way—the reasons for which are fully explained in the Rural Register for 1859, in the article on underdraining. The depth should be about three feet; and the distance apart twenty-five to thirty feet for heavy soils, and thirty-five to forty-five for porous soils.]

Peavine Clover.—I see it stated in the columns of your paper that the large or peavine clover is recommended highly. Will you please inform me where I could procure the seed, the price per barrel or bushel, &c. M. Robler. [See advertisement on another page, of William Thorburn of this city, price 12½ cents per pound.

Apple-Pie Melon Seeds.—Can you inform me where I can obtain some Apple-Pie melon seed. J. H. Abbott. [Of Wm. Thorburn of this city, and we presume at the seed stores generally.]

Worms in Horses.—I have a horse that is terribly wormy. Is there any cure for him? F. A. W. [We infer that worms (not bots) which infest the intestines are here meant. Dr. Dadd prescribes the following to remove them: 12 ounces castor oil, oil of wormseed one ounce, and oil of tansy three drachms—to be given on an empty stomach, followed by mashes of fine feed or shorts, well seasoned with salt. To be repeated, if necessary, until the bowls respond.]

Pines from Seed.—I am cutting the timber, oak and chestnut, from a lot, the soil of which is a heavy gravelly loam. Can I sow white pine seed to advantage, after the wood is cleared off; and when and how can it be collected and sown? F. A. W. *Still River, Mass.* [The shade having been removed and the sun let in, we do not think the young seedling pines would succeed. If weeds should spring up they would smother them. Young pines are very minute and feeble, and would need careful treatment, inapplicable to broad fields.]

Cattle and Pigs for Small Farms.—Being unacquainted with stock, and about to stock a small farm with four cows, please imform me what is best—Durham, Devon or native, and what breed of pigs? E. T. *Providence, R I.* [Procure the best native cattle—handsome form, good milkers, &c. —and if a full-blood or nearly full blood Durham bull can be had to breed from, the half bloods resulting will be likely to prove very satisfactory animals—costing only as much more than natives as the cost of the bull service. Suffolk pigs and their crosses are the best. Full blood cattle cannot be raised economically on small farms, and the course here designated will be found most profitable.]

Oats and Corn for Horses and Cattle.—What is the value of oats, ground, for feeding horses and cattle, as compared with Indian corn meal? An old farmer told me some years since, that he would prefer one bushel of corn and one of oats mixed, for fattening hogs, to two of corn. Is that opinion sustained by facts? F. A. W. [The various experiments which have been made to test the value of oats as food for cattle, vary from each other about *one hundred per cent.* in the extreme—conjectures or "opinions" cannot therefore be very reliable. For ordinary feeding, we should prefer them mixed. to either or both separate.]

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[For the Cultivator and Country Gentleman.]

FAMILY RECIPES.

Sponge Cake, No. 1.—One egg (beat the white separately to a froth.)—1 cup of sugar—1 cup of milk—1 2-3 cups of flour—1 tablespoonful of butter—2 teaspoons of cream tartar—1 teaspoon of soda—season with lemon extract or nutmeg.

Sponge Cake, No. 2.—Three eggs—1 cup of sugar—1½ of flour—1 teaspoon cream tartar—½ teaspoon of saleratus—nutmeg and lemon.

Sponge Cake, No. 3.—Three eggs—1 cup of sugar—1 cup of flour—3 tablespoons of cream—2 teaspoons of cream tartar—½ teaspoon of soda, and nutmeg. While warm spread with jelly, cut it in slices, and roll them quick as possible.

Cake with or without Eggs.—One cup of butter—2 cups of sugar—1 sup of sweet milk—½ cup of sour milk, or buttermilk—1 teaspoonful of saleratus—flour to make it thick, and fruit if you choose.

Red Raspberry Leaf Tea—Is valuable to allay inflammation, internally or externally, especially week and inflamed eyes, fever, &c. If people knew its value they would prize it.

Cure for Diarrhea.—One teaspoon of salt—1 tablespoonful of sharp vinegar—mix with water. Repeat the dose within a few hours if necessary. Mrs. Elihu Brown.

Blandford, Mass.

[For the Country Gentleman and Cultivator.]

Four Thousand Bushels of Corn on Forty Acres.

Editors Country Gentleman—In October last I sent you a short account of the proceedings at the "Eastern Division Fair." In that account I gave you the amount of corn raised on an acre, by **James Armstrong**, Esq., at his country seat two miles from the city. You published it with an editorial query as to whether it was in the ear or shelled. I supposed as a matter of course it was shelled, as that is the way we sell corn in Tennessee—(we do not call the *cob* corn,) and would have written you to this effect, but preferred waiting until I could see Mr. Armstrong, and ask him about it. It was some weeks before I saw him, and since then I have not had time to write. He told me that the premium was offered for only the largest yield of one acre. He had an acre measured in the best part of the field, and the corn gathered, shelled, *measured*, (not weighed,) was one hundred and sixty-six bushels and some quarts, (I do not remember how many.) The corn was sound and good, as it weighed sixty pounds per bushel. Mr. Armstrong further told me that he had forty acres in corn, which made him four thousand bushels, or an average of one hundred bushels per acre. From the same ground he gathered fifty two-horse wagon loads of pumpkins, forty bushels of peas, and ten bushels of beans.

If you still question the truth of the statement, you can address John Flemming, Esq., Secretary of the Society, or by writing to any of our county or city officers, you can learn that the statement is true. You can also bear in mind that this is the *home* of Indian corn and truthful men.

Knoxville, *Tenn.*, *Feb.* 29, 1860. A. C. Carnes.

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[For the Country Gentleman and Cultivator.]

COST OF RAISING GRAIN.

For the past five years I have kept an accurate account of the cost of all my farm products, with the view of ascertaining which was the most profitable. The first year, 1855, I planted six acres of corn at a cost of $21.80 per acre, and total cost of $130.80 for cultivation. My piece gave 186 bushels of corn or 31 bushels per acre. Deduct the worth of the fodder and pumpkins ($5 per acre) leaves $100.80 as the cost of the corn, or about 55 cents per bushel. Sold for 77 cents per bushel, giving a profit of 22 cents per bushel and $6.82 per acre.

Nine acres of oats cost $103.50, or $11.50 per acre for cultivation, and giving 405 bushels of oats or 45 bushels per acre. Deduct the price of the straw $22, and we have $81.50 as the cost of 405 bushels of oats, or about 24 cents per bushel—sold for 42 cents per bushel, giving a profit of 18 cets per bushel and $8.10 per acre.

Eleven acres of rye cost $132 or $12 per acre, and gave 198 bushels or 18 bushels per acre. Deduct the straw, $10, leaves $122 as the cost of 198 bushels of rye, or nearly 62 cents per bushel—sold for 75 cents per bushel, giving a profit of 13 cents per bushel or $2.34 per acre.

Three acres of potatoes at a cost of $70.50, or $23.50 per acre—gave 528 bushels of potatoes or 176 bushels per acre, and 13 cents per bushel—sold for 44 cents per bushel, giving a profit of 21 cents per bushel and $36.96 per acre.

Thus it will be seen that my potatoes gave the largest profit of any crop, and rye the smallest. The corn gave 31 per cent profit on the cost of cultivation—the oats 71—the rye 19¼ and the potatoes 153.

The past year I had seven acres of corn—cost $20 per acre for 21 bushels of corn, which brings the corn at 95 cents per bushel. At the present price of corn, which is $1, I have made just 5 cents per bushel profit or $1.05 on the acre. Oats $11.40 per acre, for 47 bushels of oats, costing 24 cents per bushel and selling for 37 cents, which gives a profit of 13 cents per bushel and $6.11 per acre. Rye gives 24 bushels per acre, costing about 50 cents per bushel, and selling for 85 cents, which gives a profit of 35 cents per bushel and $8.40 per acre. Potatoes, 205 bushels to the acre, costing 12 cents per bushel, worth 25 cents, profit 13 cents per bushel or $26.65 per acre. The average produce for the five years, was—

Corn,	34	bush.	per acr.,	cost	61c.	per bush.,	selling price	86c.	profit, 25c.
Oats,	44	do.	do.	do.	33	do.	do.	43	do. 10
Rye,	20	do.	do.	do.	50	do.	do.	76	do. 26
Pot's,	171	do.	do.	do.	14	do.	do.	43	do. 29

As I became convinced that potatoes are the most profitable crop that I can raise, I devote more ground to them each year, still I continue to raise a little of all other kinds, lest the potatoes may fail. But it does not follow, that because I make potatoes the most profitable, that every man can do so. Some farms are best adapted to one thing and some to another, and the only way to ascertain which those things are, is to keep an exact account with each crop for a few years, and it is an easy matter to know which pays best. It is true that farming is a slow road to wealth, but it is sure in time. Any man with good health, (and without that he cannot succeed in any business,) and a reasonable share of industry and go-a-headitiveness, can succeed in farming if he only sticks to it and makes it his business. Farmer Boy. *Oak Hill*, *N. Y.*

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SHRUBBERY.

No garden is complete without its shrubbery. A large garden of course, requires a good deal to keep it from being naked and bare in appearance, while a small one may, by a judicious arrangement of clumps of shrubs, be made to appear much larger than it really is. The list of shrubs now cultivated is large, and constantly increasing. Equally with the other branches of ornamental gardening, this department has received greatly increased attention of late years.

Shrubs are defined as plants with woody stems, perennial in their nature, and which do not grow to any great height, say twenty feet as the limit. Above that height they are properly trees. The great majority of shrubs bear flowers; in many, the flowers are succeeded by ornamental fruit; a few are cultivated only for their foliage, ornamental bark, or habit of growth. Most shrubs are spring flowering, but it is desirable in planting a garden to make a selection which shall embrace some of the late flowering varieties also.

In order to arrange shrubbery properly, it is absolutely necessary to be informed as to the usual height and habits of growth of the shrubs to be planted. It is a very common fault that people order shrubs, perhaps making a very judicious selection of sorts, and neglect forming any plan for their arrangement until they are received from the nursery, when it is of course too late for much consideration respecting them; so the gardener is allowed to put them in wherever he chooses, and the result is, most likely, that mistakes are made which it will take years to rectify.

Shrubs require very little care and attention beyond a somewhat particular pruning early in the spring, which is necessary to preserve them of a good shape. No one should begrudge the few hours labor which will be necessary for this purpose, particularly as it may be performed at a time when there is generally abundance of leisure.

We add a list of select shrubs, in which the dwarf sorts, that is those not exceeding the height of five or six feet, are placed first. The time of flowering is also designated:

Double Flowering Almond—Spring.
Berberis or Barberry, various sorts—Spring.
Calycanthus or Allspice—June.
Azalea or Swamp Pink—Spring.
Deutzias, various kinds, and all beautiful—June.
Corchorus or Kerria Japonica—July to October.
Peonia Moutan or Tree Peonia—Spring.
Spireas, various kinds, all desirable—May to August.
Spirea Reevesii flore pleno, especially beautiful.
Weigelia rosea and W. amabilis, very elegant shrubs with pink flowers—Spring.

Of the above, the smallest collection should contain Deutzia gracilis, Spirea Reevesii fl. pl., and Weigelia rosea.

Of the taller shrubs, we would select—

Chionanthus Virginica or White Fringe—20 feet high when full grown.
Cydonia Japonica or Japan Quince, 6 to 8 feet high—Spring.
Euonymus or Burning Bush, 10 feet. Ornamental berries in the Autumn.
Altheas or Rose of Sharon, 10 to 12 feet, sometimes larger. Flowers in Autumn. We have not found the Althea perfectly hardy of late years.
Philadelphus Coronaria or Syringa. Very fragrant—July.
Ribes or Flowering Currant—beautiful—Spring.
Robinia hispida or Rose Acacia—July and intervals afterwards.
Syringa vulgaris or Common Lilac—Spring.
Syringa-Persica or Persian Lilac—fine—Spring.
Viburnum opulus, Guelder Rose or Snow-Ball—June.

Of the taller shrubs, we should recommend particularly the Philadelphus Coronaria or Syringa, Japan Quince, and Flowering Currant. G. B. H.

THE CULTIVATOR.

ALBANY, N. Y., APRIL, 1860.

Fourth Annual Report of the Secretary of the Maine Board of Agriculture, 1859.—We are indebted to S. L. **Goodale** of Saco, the Secretary of the Maine Board of Agriculture, for this volume of over 250 pages. It contains a large amount of valuable matter on practical agriculture, more especially in relation to cattle, grasses, and grazing; including also notices and descriptions of the newer mowing machines, hay presses, &c., with many illustrations. The only improvement we could desire is a subdivision of the work into heads, as it is now entirely deficient in chapters, sections, or indications of separate subjects,—a deficiency however partially made up by a good index. It is handsomely printed, and as a repository of facts and experiments, is eminently creditable to the Board and its intelligent and indefatigable Secretary.

Horn-ail.—Dr. Dadd, in his late excellent work on the Diseases of Cattle, treats with great severity the common opinion that nearly every disease which attacks cattle is the "horn-ail," or "hollow horn," or else "tail-ail"—the coldness or heat which these parts exhibit when the animal is sick, being only symptoms. We lately had a valuable cow taken sick, and kind neighbors directed the horns to be bored, the tail to be *shortened-in*, &c. We suspected the trouble to arise from accidentally eating too much grain, producing indigestion, and attendant evils, and accordingly administered half a pint of freshly pounded, fresh charcoal, mixed with a quart of water, and poured down the animal's throat by means of a junk bottle. This is one of the best, most efficient, safe and certain remedies we ever used for such diseases. It can scarcely in any case do injury. In the present instance the hollow horn and tail-ail were soon cured.

Soiling Cattle.—We make the following extract from a private letter from a subscriber in Jefferson county:

"In your note to me of last August, you expressed a wish that I would furnish you for publication, the result of my experience in the soiling of stock. I have hesitated about doing so, for the reason that I do not 'wield the pen of a ready writer," and have some doubts about the propriety of my attempting to write for the public eye. I am fully satisfied, however, that the soiling system is *the* system for small farms, or for even large ones, if the land is mostly tillable. In speaking with my neighbors upon the subject, about the first remark made by them is the inquiry, 'will cows do as well?" Perhaps the general impression may be that stock kept in this way will not do as well —this I think a mistake. At some future time I may furnish you with the details of the method pursued by me, for publication, if you think them of sufficient importance to the public."

This subject of soiling cattle is one of much interest, and there is a great desire for practical information in relation to it. We hope our correspondent will furnish the details of his practice.

Importation of Ayrshires.—We learn that Mr. E. S. **Poor**, of South Danvers, Mass., has lately received two heifers and one bull of the Ayrshire breed from Scotland. They are said to be from the best blood in Scotland, and good judges here pronounce them as fine looking animals as have been imported in that section. Mr. P. writes us that after the heifers calve he intends to test them accurately in comparison with "native" breeds, and we hope he will favor us with the results for publication.

☞ We are indebted to Mr. Alderman **Mechi**, for a copy, in pamphlet form, of the Paper read by him before the Central Farmers' Club, London, Feb. 6, on the "Sewerage of Towns as it affects British Agriculture," with a copious Appendix, affording much statistical and other information of value in connection with the subject, together with the recent correspondence of the Alderman with Baron **Liebig**, to which we have heretofore alluded. Also to **Robert Russell**, Esq., of Edinburgh, for an interesting article on "Grass Seeds," communicated by him to the Highland and Ag. Society's Journal. Also to Mr. **Charles Hendrie**, of Airdrie House, for copies of recent Glasgow journals.

☞ The Second Annual Meeting of the "Association of Breeders of Thorough Bred Neat Stock," as the full title of the association apparently runs—was held at Springfield, the 7th inst. We hoped to have been present, but this proving impossible, we quote from the published reports the following list of officers:—

President—**Paoli Lathrop** of South Hadley.

Vice Presidents—Josiah Fogg of Deerfield, William Birnie of Springfield, R. Linsley of West Meriden, Ct., Jacob N. Blakeslee of Watertown, Ct., John Brooks, Jr., of Princeton, Mass.

Secretary and Treasurer—H. A. Dyer of Hartford, Ct.

Committees on Pedigrees.—On Short-Horns, Herefords and Alderneys—S. W. Buffum of Winchester, N. H., S. W. Bartlett of East Windsor, Ct., Phineas Stedman of Chicopee, Mass.

On Devons and Ayrshires—Sanford Howard of Boston, E. G. Faile of West Farms, N. Y., B. H. Andrews of Waterbury, Ct.

A report of the committee appointed at the previous meeting, on pedigrees, and a supplementary report by Mr. B. H. Andrews of Waterbury, Ct., on the scale of points for Devons, elicited an animated discussion. The afternoon was chiefly occupied with the discussion of pedigrees and the imperfections of the Herd Books.

It was voted to hold the next annual meeting at Springfield, on the first Wednesday in March, 1861. Breeders of stock are requested to send the pedigrees of their animals to the secretary before the 1st of February next. A session in the evening was devoted to a free conversational debate on root culture and the feeding of roots.

Some of the speakers in the afternoon expressed themselves as by no means satisfied with either the English or American Herd Books, and the proposition that a new one, to be entirely purged of all imperfect or suspicious pedigrees, should be gotten up under the auspices of the Association, actually met with so much favor from the meeting, that a committee was appointed to consider its propriety and report another year.

A Good Cow.—I had a cow, (which will be eighteen years old in April,) delivered of a fine calf on the 20th ult. I have owned her thirteen years, and twelve years since, we made (in the month of June) twenty-one and a quarter pounds of butter from her in seven days. She had not calved for four years, but she was milked until October last. I disliked to kill her, as she was foster-mother to my child, who will be 12 years old in April, and weighs 95 lbs. C. B. *Uplands.*

Musquet Grass.—I send you a small quantity of Texas Musquet grass seed, which, if it is not in your neighborhood, may be interesting to some of your farmers. I have raised it successfully at my farm at "Grotto Dell," Roane Co., Va. I deem it a good and valuable grass for pastures, though inferior to timothy and clover for meadows or for hay. James A. Lewis. *Kanawha C. H., Va.*

Osier Willow for Hedges.—If you will insert an inquiry as to how the Osier Willow is liked for live fence, I think it would be read with interest by many. I set 21 rods last spring. It has made a dense growth of five feet, and has been examined by many of our best farmers, who unanimously pronounce it just the thing for the purpose of fencing. Mice will not gnaw the bark, and the annual clippings can be sold for enough to pay well for all trouble. Mr. P. W. of Auburn, remarked on viewing my hedge—"I have all my life been looking for a hedge plant that would make a quick and durable fence, and now I think I have found it." D. L. Halsey. *Cayuga Co., N. Y.*

Lice on Cattte.—In your issue of the 26th inst. I notice an inquiry as to what application will most speedily destroy lice on cattle. Permit me for the benefit of C. H. M. and others, to give a little of my experience in the matter. During a number of years that I have kept cattle, I have occasionally had calves and full grown cattle infested with vermin—have tried various remedies, but was never entirely successful until two weeks since, when I discovered that two of my young cows were very lousy.

At the suggestion of a neighbor who appeared to have the utmost confidence in the remedy, I applied freely lamp oil from the head along the back, and behind as far down as the udder—also in spots along the sides—it has proved entirely effectual. In two days after, upon examination, I found the slain in abundance, but none that were alive.

Fayetteville, N. Y. S.

Posts Should be Inverted.—Wm. Howe of Allegany Co., relates in the Genesee Farmer, an experiment made to test the comparative durability of posts set as they grew or top-end down. He says:—"Sixteen years ago, I set six pairs of bar posts, all split out of the butt cut of the same white oak log. One pair I set butts down, another pair, one butt down, the other top down; the others top down. Four years ago, those set butt down were all rotted off, and had to be replaced by new ones. This summer I had occasion to re-set those that were set top down. I found them all sound enough to re-set. My experiments have convinced me that the best way is to set them tops down."

Imported "Symmetry."—We find the annexed notice of this splendid horse, which was imported last autumn by Dr. J. R. Woods of Albemarle county, Va., in the Charlottesville Advocate: "Symmetry was on our Court Square on Monday last, for public inspection. So far as we could gather from the opinions of our farmers, it was generally conceded that he fully comes up to the high praises which he has received at our State Fair and on exhibition in other places, and that he is admirably suited to the purposes of this county."

Barley *vs.* Indian Corn.—The question, as to the relative value, pound for pound, of barley and Indian corn for feeding farm stock, was recently discussed by an Ag. Society at Rhode Island. It was thought (as reported in the Boston Cultivator,) by all who had used both, "that the barley meal was as valuable as the Indian for sows suckling pigs, for young pigs, and for all swine except within a month of slaughter, when corn meal may harden the pork. It was thought best for milch cows, and for sheep at lambing time, it is highly recommended. It was also thought good for making beef." Some had tried it for working horses, but did not like it, though it is the only grain given the hardy Arab steeds. The comparative profit of its growth depends upon its success as a crop. Its failure in many sections where it has formerly flourished, makes us prefer the surer product of Indian corn.

Curious Fact in Cheese Making.—In the celebrated Goshen cheese dairies, it is found, according to a writer in the Ohio Farmer, that the greater the amount of curd that can be obtained from a given amount of milk, the better will be the curd or the quality of the cheese made from it. And this difference in amount, under the management of various curd makers, is enough to astonish those who have no actual acquaintance with the matter. It is said sometimes to equal a fourth of the whole amount.

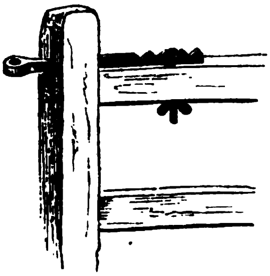
Independent of Peru.—The farmers of Great Britain are congratulating themselves that they are becoming more independent of the Peruvian Guano monopolists. The reports for the past year show that "while the sales of guano in 1859 were far short of former years, substitutes can be obtained of equal value to the consumer at a lower price." Superphosphate of lime is now largely made by local manufacturers, and the prices of raw materials have been generally on the decline.

Profits of High Farming.—In a late lecture, Mr. Alderman Mechi, referring to his Tiptree Hall estate, said: "For the last six years, my gain as landlord and tenant on my little farm of 170 acres has been nearly £700 (about $3,500, or over $20 per acre,) per annum. Even this year, with wheat at 42s. per quarter, I have gained £600, after paying every expense. Of course, much of this gain has arisen from steam-power, drainage, deep cultivation, and other improvements; but the liquefied-manure system has greatly contributed to this result."

Large Ear of Corn.—We have been shown an ear of corn, brought from Kentucky, which had 26 rows, and about 1,000 kernels.

GATE HINGES.

Messrs. Editors—Can you give me the best and most approved fixture for letting out or contracting the hinges of farm gates, so as to compensate sagging? B.



The annexed figure shows a good contrivance. The upper side of the hinge, (which is made just loose enough to slide when required,) has a few notches. It passes through a ring, which by means of the nut below the bar on which the hinge rests, is drawn tight, holding the hinge firmly to its place. When it is desired to raise or lower the latch end of the gate, unscrew the nut just enough to allow the notches to pass freely; slide it to the desired position, screw up again firmly, and the thing is done. To be firm and strong, this contrivance requires a good sized and solid heel post to the gate—a thing which all gates should have, and which is no detriment to easy and successful working; for, being close to the hinges, it exerts no leverage to draw them or cause sagging; and having a very short motion it does not give any momentum to the gate against the latch post, which so frequently batters gates to pieces when heavy at the latch end.

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How to Raise Carrots.

Editors Cult. and Co. Gent.—In "Rural Affairs for 1860," you recommend raising carrots for cows in villages. Now I wish you to answer the following questions, through The Cultivator—1st. How should the ground be prepared?—2d. When should they be sowed?—3d. What is the best kind to raise?—4th. How far apart should the drills be, and how far apart in the drill should the carrots be when properly thinned?—5th. How much seed should be used to the square rod?—and 6th What will the seed cost to sow 10 rods.

Sunny View Garden, Ohio. G. W. B.

1. The carrot wants a deep, rather light, sandy loam soil, of the highest degree of fertility; but will succeed on a strong loam, if dry and mellow. When the subsoil is hard, deep subsoiling is of great value. If thoroughly plowed and manured the previous year, it would be best, except on the very lightest soils, which do not hold manure—2. Early sowing is best, say as early or before the first planting of corn. Later crops are sometimes injured or prevented from vegetating by drouth—3. The long orange and the white carrot are the two best sorts. The white is perhaps most productive, and much more easily harvested—but it is not generally considered to be quite so rich as food, and it is in greater danger of injury from late autumnal frosts—4. Sow in drills with a planter, two and a half to three feet, and thin out to six inches in the drill, if the soil is rich; or four inches if not rich.

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GRAPES FROM CUTTINGS.

Editors Co. Gent.—I send you the following remarks on the propagation of grapevines from cuttings, which may be done with very little trouble.

Have a box 2 feet high, and about 2½ wide—the length as you require—fill half full of well pulverized soil—prepare the cuttings with three eyes—cut smooth below the bottom one—place them in a slanting position, with the last bud just above the soil—take sixpenny white cotton cloth, and nail tightly over the box—give warm soft water freely every evening—place the box in a sunny nook, and in a few weeks your box will be filled with grapevines ready for potting or planting in borders.

From one who is experimenting on the culture of the vine in a small green-house in summer, and in the cellar through the winter. J. A. D.

WM. R. PRINCE & CO., FLUSHING, N. Y.,

will continue to reduce their prices for Grapes in their Catalogues published spring and fall.

NATIVE GRAPES AT REDUCED FRICES.

The following 38 cents—$4 per dozen: Alexander, Early Amber, Elsinburg, Hartford Prolific, Minor or Venango, Northern Muscadine. The following 50 cents—$4.50 per dozen: Albino, American Hamburgh, Baldwin, Blackstone, Brinckle, Canby's August or York Madeira, Cassady, Concord, Diana, Emily, Franklin, Garriques, Halifax, Herbemont, Kilvington, Kingsessing, Lenoir, Louisa, Marion Port, Mary Ann, Missouri, Norton's Virginia, Ohio or Jack, Ohio Prolific, Raabe, Rebecca, St. Catherine, Summer Black, Wine Arbor, Winslow. The following 50 to 75 cents—$5 to $8 per dozen: Bland, Canadian Chief, Child's Superb, Clara, Ozark, (3 varieties,) To Kalon, Union Village. The following 75 cents—$8 per dozen: Baltimore, Black King, Coleman's White, Early Hudson, Hensell's White, Holmes or Old Colony, Large True Marion, Manhattan White, Monteith Cluster, Mustang, Napoleon, Pond's Seedling, Potter's Catawba, Purdy's Prolific, Ramsdell, Scuppernong, (3 varieties.) Secord's White, Somerville, Troy Hamburgh. The following 75 cents to $1: Anna, Catawissa, Ive's Seedling, Long, Los Angelos, Longworth's Catawba, Miles, Offer, White King. The following at $1: August Coral. (true,) Braddock. Carter's Favorite, Early Isabella, Empire, El Paso, Graham, Gridley, Hyde's Eliza. (true,) White Isabella, White Shonga. The following $1 to $2: Delaware, (by some called Native.) Taylor or Bullitt, Logan, Ontario and Purple Catawba. The following $2 to $3: Allen's Hybrids, Rogers' Hybrids, and Cuyahoga: and in the spring the following, $1 to $1.50: Cuyahoga, Delaware, (called native by some,) Logan, Taylor or Bullitt, Ontario, Purple Catawba. Allen's Hybrids, $2 to $3, and in the spring, Maxitawny, Blue Favorite, Wilmington and many others. Isabella and Catawba, one and two years, $4 to $8 per 100. Clinton, one and two years, $7.50 to $10 per 100. Concord, Diana, and Hartford Prolific, $25 to $30 per 100.

Foreign Grapes.—All usual varieties 50 cents—$4 per dozen; and all the new varieties at reduced rates.

Blackberries—New-Rochelle, Dorchester, Parsley-leaved, &c. Raspberries—Antwerp, Fastolff, Franconia, Brinckle's Orange, Allen, &c. Currants—Versailles, Cherry, Caucase, White Grape, Fertile d'Angers, Victoria, &c. Strawberries—A collection unequalled by any other, and at the lowest rates (see Catalogue.) Rhubarb—Linnæus, Victoria, Prince Albert, Magnum Bonum, &c. Spanish Chestnuts, Filberts, Figs, Pomegranates, Mulberries, &c. Stocks—Apple, Pear, Mazzard, Mahaleb and Angers Quince. 18,000 Norway Spruce, 8 to 10 feet. 12,000 Arborvitæ, fine form, 6 to 10 feet. 10,000 Silver Maples, 8 to 12 feet. 50,000 Osage Orange, 1 and 2 years. Bell and Round Cranberries. Large Apples, large Standard and Dwarf Pears in bearing, large Cherries and Dwarf do., large Plums. Seeds—Osage Orange and Sorghum. Chinese Potato or Dioscorea, $3 per 100. Bulbs—Gladiolus, French Hybrids, 70 varieties, 15 cents to $1; Tuberoses, Amarylis, Jacobean Lily, Tiger Flowers, Japan Lilies, Cyclamens, Oxalis, and 300 splendid varieties of Dahlias. N. B. We ask especial attention to our Descriptive Cataloge of Grapes, comprising 400 varieties. Mar. 22—w1t*

GREAT CURIOSITY.—Particulars sent free. Agents wanted.

SHAW & CLARK,
Biddeford, Me.

Dec. 8—w13tm6t.

MARBLEHEAD DRUMHEAD.

This Cabbage is by far the most popular and profitable kind sold in Boston Market. It originated in Marblehead, Mass., and holds the same rank among cabbages as the Hubbard squash among squashes, being distinguished for its reliability for setting a symmetrical head remarkably hard and heavy. It is early, very fine grained and sweet, with a stump, when properly cultivated, of but one to two inches in length. Under fair cabbage culture, ninety-five per cent. will set good heads to the acre; under good culture, frequently every plant on an acre will set a marketable head. A package of the best variety of this cabbage, the Stone-Mason, containing seed more than sufficient to raise a winter's supply for one family, forwarded post-paid to any part of the United States for 25 cents. One pound of seed forwarded post-paid on the receipt of $4, or for $3 to parties paying their own freight. I aim to introduce no product new to the public that will not be a full return for the money they invest. I will give five dollars to any person for one ounce of seed of any Drumhead Cabbage, that will excel this variety.

JAMES J. H. GREGORY.
Marblehead, Mass.

Mar 29—w7tm2t

FARM FOR SALE.—Situated about half a mile of the pleasant village of Wallingford, New-Haven county, State of Connecticut, and about three-fourths of a mile of the Hartford and New-Haven depot. The buildings are nearly new and very convenient, and well located. A good Orchard of grafted fruit of all kinds—a spring of water is brought to the house and barn. Said farm contains about one hundred and twenty acres. The whole or part will be sold to suit a purchaser. It is as good a farm as there is in the county, and will be sold on reasonable terms. For particulars inquire of

P. WHITTELSEY, Wallingford, Conn.

Mar. 1—w2tm1t.

SOMETHING THAT EVERY FARMER OUGHT TO KNOW.

THAT D. W. SHARE'S PATENT

COULTER HARROW, HORSE HOEING MACHINE, and POTATO-COVERING AND HOEING MACHINE, will save labor enough in one season to pay their cost, if used understandingly; and Manufacturers ought also to know that one of the best investments of the present day is to purchase the right of the above implements, as several States remain yet unsold. All orders for the above promptly attended to, except from territory sold.

For further particulars, address the subscriber, manufacturer and Patentee, who will send Circulars or any information desired, free to any part of the United States.

D. W. SHARES,
Hamden, Conn.

Mar 22—w3tm1t

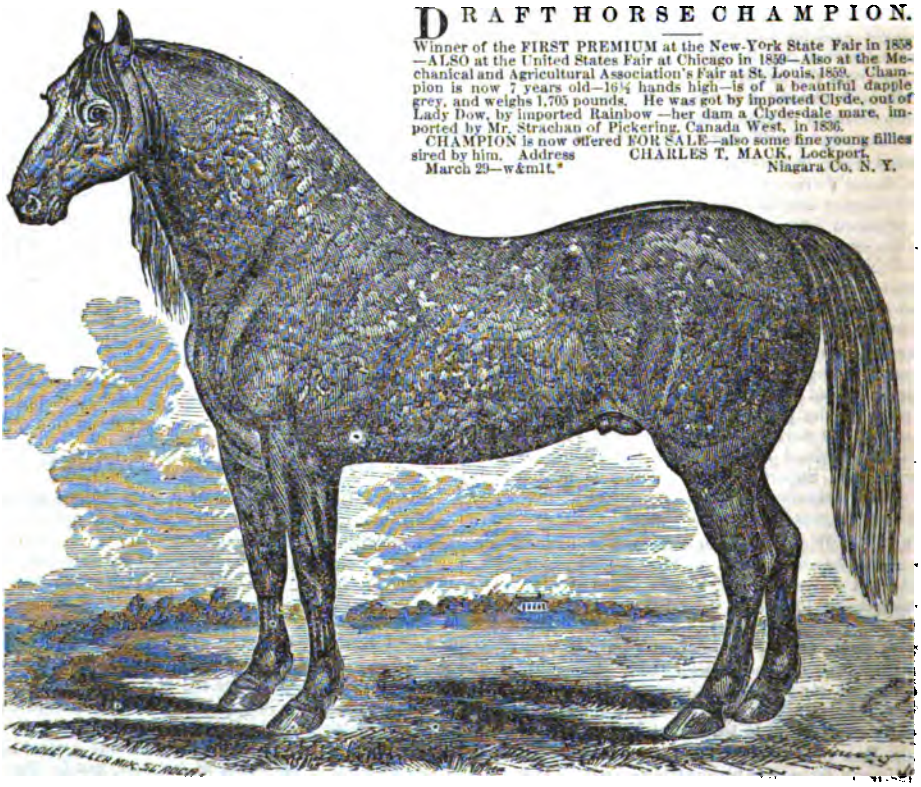
DRAFT HORSE CHAMPION.

Winner of the FIRST PREMIUM at the New-York State Fair in 1858 —ALSO at the United States Fair at Chicago in 1859—Also at the Mechanical and Agricultural Association's Fair at St. Louis, 1859. Champion is now 7 years old—16¼ hands high—is of a beautiful dapple grey, and weighs 1,705 pounds. He was got by imported Clyde, out of Lady Dow, by imported Rainbow—her dam a Clydesdale mare, imported by Mr. Strachan of Pickering, Canada West, in 1836.

CHAMPION is now offered FOR SALE—also some fine young fillies sired by him. Address

CHARLES T. MACK, Lockport,
Niagara Co., N. Y.

March 29—w&m1t.*



DRAFT HORSE CHAMPION.

ALL KINDS OF AGRICULTURAL BOOKS.

Farmers, Gardeners, Nurserymen, Fruit-growers, Dairymen, Cattle Dealers, and all persons interested in tilling the soil or adorning their grounds and dwellings, will be supplied with the most complete assortment of Books relating to their business that can be found in the world, by

C. M. SAXTON, BARKER & CO.,
Agricultural Booksellers and Publishers of the Horticulturist,
No. 25 Park Row, New-York.

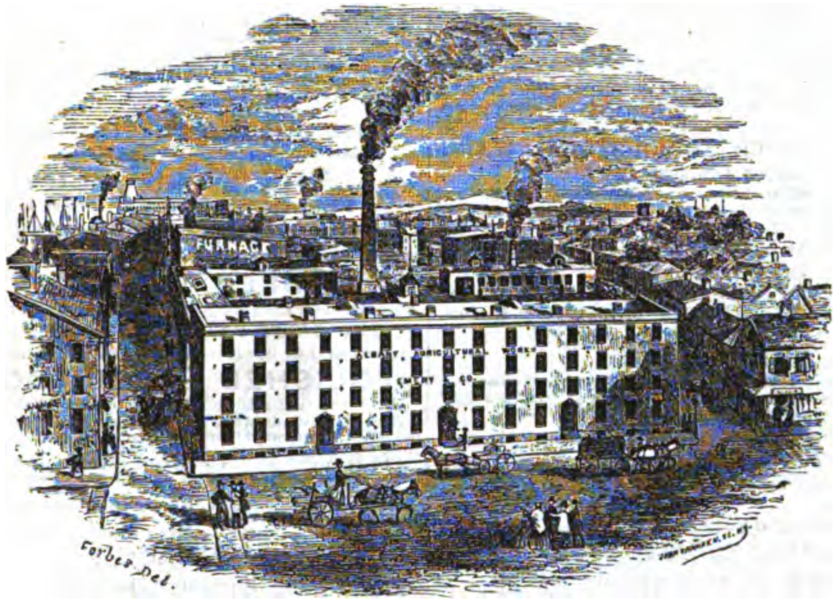
☞ Catalogues gratis. Books sent by mail. AGENTS WANTED.
Mar 15—w13tm3t

THOROUGH-BRED NORTH DEVONS AT PUBLIC AUCTION.

The subscriber intends holding his Second Public Sale of **DEVON CATTLE** early in the coming June, when he will offer between 20 and 30 head of his own breeding—all Herd Book animals, and of superior excellence. As at his previous sale, each lot will be started at a very low up-set price, and sold, without reserve, to the highest bidder over that amount.

Catalogues will be ready about the middle of April, with pedigrees and full particulars.

C. S. WAINWRIGHT,
Feb. 23—w6tm2t The Meadows, Rhinebeck, N. Y.



EMERY BROTHERS,

PROPRIETORS OF THE

ALBANY AGRICULTURAL WORKS,

WAREHOUSE AND SEED STORE,

62 & 64 State Street,

ALBANY, N. Y.,

MANUFACTURERS AND DEALERS AT WHOLESALE AND RETAIL, OF

EMERY'S PATENT RAILROAD HORSE POWER,

And all other Power Machines to be Driven by Horse Power, &c., &c.,

AMONG WHICH MAY BE FOUND

THRESHING MACHINES,
CLOVER MILLS
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Also every conceivable Implement required for the Plantation, Farm and Garden—also for the Dairy and Farm House and buildings. Their

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Embraces all the variety of kinds and sizes required for this Latitude, Soil, and Modes of Culture, as well as for most other Climates and Countries, and all are made under their own personal supervision, and combine all modern improvements. The materials are of the BEST Metals and Timber used in any like establishment, and their Workmanship and Beauty of Finish are unequalled.

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SEED DEPARTMENT

Comprises all the variety offered by any similar establishment in the country, and all seeds WARRANTED FRESH and GENUINE, and true to name and kind.

Their newly published and highly

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Embraces a large fund of valuable information in relation to the construction and uses of the various Machines and their principles of operation; also the FINEST and BEST COLLECTION OF ILLUSTRATIONS of Machines and Implements ever published, together with a Price List, Terms of Sale, and Warranty—which is furnished gratis to all applicants upon receipt of a three-cent stamp to prepay the postage.

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GRAPEVINES FOR SALE.

5,000 Isabella, 2 years old—5,000 Catawba, 2 years old,
At $12.50 per 100, or $100 per 1000.
Apply to LINDLEY M. FERRIS,
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Also ROSES, VERBENAS, DAHLIAS, FLOWERING PLANTS, &c., cheaper than they can be procured elsewhere. Catalogues gratis.

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Our motto has ever been and still is to furnish the BEST ARTICLES at the LOWEST PRICES.

Our IMPLEMENTS are of the most improved patterns. Our

GARDEN AND FIELD SEEDS

Are selected from RELIABLE GROWERS.

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No. 1 Peruvian Guano, warranted pure.
"Hoyt's" Superphosphate of Lime, the best in the market.
Poudrette, manufactured by the Lodi Manufacturing Company.
Blood and Wool Manure, $25 per ton.
Bone Sawings, Turnings and Ground Bone.
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We will furnish Dealers with any of the above Fertilizers in quantities to suit at the lowest rates. GRIFFING, BROTHERS & CO.,
Feb. 9—w&m3mos. Proprietors.

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A. SAUL, (successor to the late A. J. Downing & Co.,)

has the pleasure of announcing to the patrons of this old establishment, and the public in general, that his stock of

Fruit and Ornamental Trees, Plants, &c.,

for sale for the ensuing spring trade, is full and complete, and comprises everything to be obtained in his line of business, viz:

A large stock of Apple, Pear, Cherry, Plum, Peach, Apricot, Nectarine and Quince trees, 1 to 3 years from the bud, of superior quality and growth. Grapevines, native and foreign, embracing all the new and rare varieties. Gooseberries, Currants, Raspberries, Blackberries and Strawberries, of all the new and old proved varieties. Rhubarb and Asparagus roots do.

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DECIDUOUS TREES of extra size, for street planting, and giving immediate effect to Parks, Lawns, Cemeteries, &c., &c., such as Maples, 8 varieties; Elms, 10 varieties; Ash, 8 varieties; Oaks, 6 varieties; Catalpas, Horse Chestnuts, Ailanthus, Larch, Tulip (true,) Abele, Negundo, Mountain Ash, Deciduous Cypress, Weeping Willows, Lindens, &c., &c.

FLOWERING SHRUBS.—Over 50 choice species and varieties.

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The above stock is all of the best quality and growth, and will be sold on the most reasonable terms.

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A. SAUL, Highland Nurseries,
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BERKSHIRE PIGS from pure imported stock,

for sale at $10 per pair, delivered in New-York. Address W. H. CLAY, Staten Island, South Side Post Office, or
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TO FARMERS AND GARDENERS.—

The subscribers offer for sale 60,000 barrels of POUDRETTE, made by the Lodi Manufacturing Company, in lots to suit purchasers. This article is in the twentieth year of its introduction into this country, and has outlived fertilizers of every other description, for the following reasons:—

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Price.—1 bbl. $2—2 bbls. $3.50—5 bbls. $8, and over 6 bbls. $1.50 per barrel, delivered free of cartage to vessel or railroad in New-York City.

A pamphlet containing every information, and certificates from farmers all over the United States, who have used it from two to seventeen years, will be sent free to any one applying for the same.

GRIFFING BROTHERS & CO.,
Feb. 16—w13tm3t. 60 Courtlandt Street, New-York.

"WONDERFUL!"

THE "TELEGRAPH CHURN,"

which makes the best Butter in the world in Two Minutes, and which was pronounced the best on exhibition at the Winter Meeting of the N. Y. State Ag. Society on the 9th of this month. Price $7, and large enough for eight cows. A boy 10 years old can work it. For sale by W. W. EGGLESTON,
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THE DEEP BREAKING UP PLOW.

THIS PLOW turns a furrow Two Feet Deep, and of corresponding width.

When desired, the furrow can be deepened another foot with my new subsoil Trench Plow, thus turning up the soil, Three Feet deep.

It is the most suitable Plow ever used for preparing the ground for Vineyards and Nurseries, or for any other crop requiring an extra deep tilth. It pulverizes the soil better, and leaves the ground in a finer condition than can be done by the spade, and at about one-fourth the expense—thus making it a great labor-saving machine.

THE SUBSOIL TRENCH PLOW

Penetrates the soil from one to three feet deep as required.

THE DRAIN PLOW

For opening deep ditches for tile or other drains.

THE ROCK PLOW

Turns out large stones or small rocks from either the surface or subsoil.

DEEP TILLERS.

These Plows are made to run from 12 to 20 inches deep as required.

THE GIBB'S PATENT CYLINDER PLOW

Is celebrated for its ease of draft and the wide furrow it turns.

POLISHED STEEL PLOWS

For Texas, California, and all other parts of the United States.

These are most suitable for clay and other adhesive soils, as they do not adhere to the mould-board. They are light and strong, and of all sizes, from small one-horse to large four-horse.

All the above Plows are new patterns, manufactured for this market exclusively by myself. They are remarkable for light draft and the perfection of their work.

In addition to the foregoing, I keep upwards of one hundred and fifty other kinds of Plows.

ALSO ALL OTHER AGRICULTURAL IMPLEMENTS.

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FLOWER, FIELD AND GARDEN SEEDS of all varieties.

GUANO, BONE DUST, POUDRETTE, and various other fertilizers.

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Government Brand and Weight on every bag.

SUPERPHOSPHATE OF LIME

BONE DUST, LAND PLASTER, &c.

For sale in quantities to suit purchasers, at lowest market price. Send for a Circular. A. LONGETT,
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FERTILIZERS.

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SHARES' PATENT COULTER HARROW AND GRAIN COVERER. Price $15.

SHARES' PATENT POTATO-COVERING MACHINE.......... $10
SHARES' PATENT CULTIVATING AND HILLING MACHINE. Price $10.

Which will save their cost in three days' work, besides making the work of harrowing, hoeing and hilling a pleasure instead of a drudge. Also a full assortment of PLOWS, HARROWS, SEED PLANTERS, and in fact, everything required by the farmer. For particulars, apply to W. W. EGGLESTON, (successor to Pease & Eggleston,)
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Wm. Summer, Pomaria, S. C.
R. C. Ellis, Lyons, N. Y.
Col. A. J. Summer, Long Swamp, Florida.
A. J. Bowman, Utica, N. Y.
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We are also manufacturing Sayre's Patent Horse Hoe and Potato Covering Machine, Sayre's Patent Cultivator Teeth in quantities for the trade; and all kinds of steel and swage work in the agricultural line. Send for a circular. SAYRE & REMINGTON.
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Price Lists,

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All Orders must be accompanied by Cash, satisfactory reference in England, or may be forwarded through CRAIG & NICOLL,
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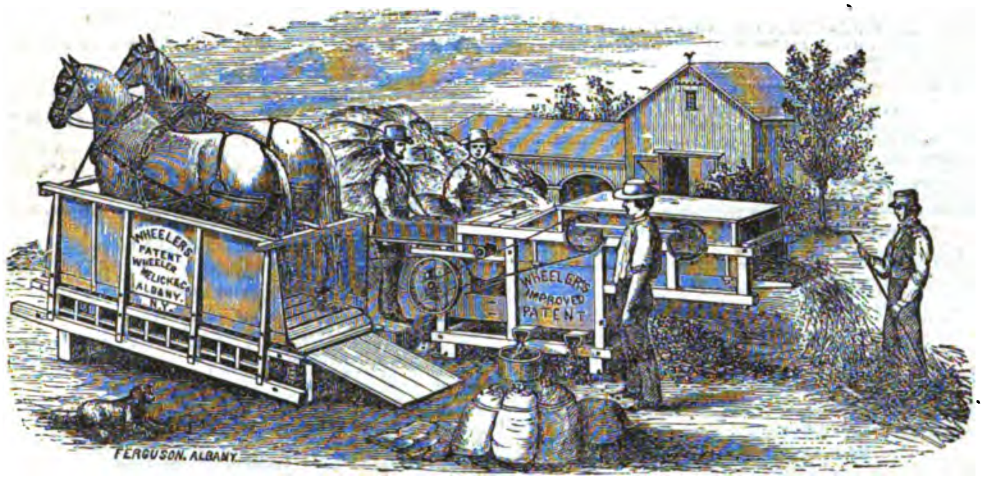
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OVERSHOT THRESHER WITH VIBRATING SEPARATOR,
Threshes from 75 to 100 bushels of Wheat, or twice as many Oats per day without changing horses—by a change nearly double the quantity may be threshed. Price $128.

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Mar 15—w2tm1t Albany, N. Y.

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NOVELTIES!!!

THE PERFECTED TOMATO, 25 cents; by mail 28 cents.
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TRUE HUBBARD SQUASH, 20 cents—by mail 29 cents.
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THIRD] TO IMPROVE THE SOIL AND THE MIND. [SERIES.

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Editorial Notes Abroad.

No. XXX—NORFOLK AGRICULTURE.

In recurring to my memoranda about the Agricultural affairs of this noted county of Norfolk, it is proper to disclaim any effort toward an exhaustion of the subject, either in a few dashing sentences, or indeed with all the patient labor that I might, or would or could devote to it. The Royal Agricultural Society of England, in the pursuance of that policy which the Society of our own State has been imitating, as by degrees its funds have permitted —from time to time has offered valuable premiums for Reports upon the Agriculture of the several counties. That upon the Farming of Norfolk, awarded the sum of £50 about 16 years ago, is said to "fill more than 400 pages of a large octavo volume." The Society, indeed, appears in this instance to have really won a somewhat elephantine prize; the *Journal* would not contain it, and the bulky and all-devouring document was given over to the slow and inglorious death of separate publication.

During the interval between the day of the protracted Survey of Norfolk Agriculture just alluded to, and the present era of more hurried and less complete performances, there has not a little taken place to mark the period—short though it is—as one of interest and general progress. I owe my acknowledgments to CLARE SEWELL READ, Esq., for numerous illustrations of the changes that have occurred—many of them described in an Essay upon the subject then just furnished by him to the Society's Journal—upon which I shall rely as the source of most of the following facts; for the fame of the County, not less than the lessons which they may perhaps be made to convey, seem to me sufficient to warrant for their consideration, a longer pause than usual, at this point in our journeyings.

Let us then bear in mind that we are by no means entering the Garden of England, so far as natural advantages are concerned, however its present appearance and products might apparently justify such an appellation. But a small portion of its surface "can be considered a natural soil for wheat;" and yet we are met by the statistical fact that more than 200,000 acres—more than one-fifth of its total area under tillage—an area "including thin chalks, hungry gravels and blowing sands," produces an average crop throughout, of *thirty bushels and one peck per acre* of this grain. Speaking, then, of the county, as we should of one grand farm, and basing our statements upon the figures collected in 1854 by Sir John Walsham, as quoted by Mr. Read, we might roughly lay off this extensive establishment as consisting, one-fifth of permanent pasture, while the remaining four-fifths will apportion themselves nearly equally between the different divisions of that rotation which owes to the county its origin, its common name and its world-wide celebrity. In other words, could we summon some East-Anglian chieftain of ancient sovereignty, back from the quiet sleep of centuries to active dominion as of yore, over the twelve hundred and eighty thousand acres of Norfolk, how little would he recognize in what he saw, the primeval state of "cold obstruction" in which so much of it once lay at the mercy of every wind and wave, and which still characterizes about 275,000 acres—a lingering remnant too obstinate for the science and labor of our day, even, to subdue at a profit. He would see such oxen as were never roasted whole in the day of his glories, and such sheep as never furnished him a fleece, grazing over luxuriant herbage; he would find the four-field system in possession of fully its due proportion of wheat, having in turnips and similar crops another part, in barley and oats a third, and in artificial grasses the remainder. In glancing over the map of his much metamorphosized domain, however, and coming down from these generalities to a little more accurate acquaintance with what his successors are accomplishing, he would learn that the money-bringing crops are actually the ones that exceed their allotment of space in this rough estimate! He would see the farm employed

In Wheat,	203,000	acres.
Barley, 174,000; Oats, 35,000; Rye, 6,000,	215,000	do.
Turnips, 161,000; Mangolds, 16,000; Beans and Peas, 21,000; Vetches, 3,000,	201,000	do.
Clover and Artificial Grasses, 172,000; Bare fallow, 10,000; Carrots, Cabbages, &c., 9,000; Potatoes, 2,000,	193,000	do.
	812,000	do.
Which, with the permanent pasture,	193,000	do.
Gives the total area under Tillage,	1,005,000	do.

I doubt if the round numbers as above given, would not quite suffice to lay the ghost of our intrusive Saxon, in mercy to the repose of whose bones, wearied and worn in unsuccessful conflict with the invading and usurping Norman, let us forbear tracing the triumphs of the latter into all the intricate exactness of units and fractions.

The interesting statistics collected by Sir John Walsham cover the two years 1853 and 1854, and the value of such tables of agricultural facts, is argued from the proof afforded by these, that Norfolk was growing in 1854, 13,000 acres more of wheat, feeding nearly 10,000 more bullocks, and had 7,600 acres less lying idle in bare fallow, than during the preceding year. Many English farmers,—indeed all, I presume, of those more advanced in their cultivation and their views,—are strongly in favor of the adoption of some system of collecting thorough and complete Agricultural Statistics,—a measure which would be of great value and interest in American Agriculture, but which, there as here, finds numerous opponents of that class who think all "ignorance is bliss."

The table of Live Stock maintained in the County, shows one horse to rather less than 18 acres tillable land; almost one head of cattle to every 10 acres; 841,591 sheep to 1,005,135 acres, or not very far short of the ideal of the best English farming, "one sheep per acre," and about as many pigs as there are cattle. It is in thus examining the well attested results of English Agriculture upon large surfaces, that we ascertain really what it can and does accomplish; we are not talking of some "high farmer's" sayings and doings, but we are taking the average of the bad and good over a whole county.

To reduce the figures exactly to the standard of a one-hundred acre farm, in order that our farmers may thus judge upon a more familiar basis as to the allotment of the land and what it produces, we find that the scale of operations in Norfolk, if carried out similarly upon one hundred acres, would give us:

20.2 acres in	wheat—30 bush. 1 pk. per acre,.......	611 bushels wheat.
17.8 do.	barley—38 bush. 2 pks. do.	664 do. barley.
4.1 do.	oats—16 bush.* per acre,..............	184 do. oats.

So much for the grain produced. The proportion of bare fallow would be less than the land which lies waste in one spot and another, on the majority of hundred-acre farms with us, being only one acre and a very small fraction. We should then have

In roots, (exclusive of potatoes,)........................	20.1	acres.
In cabbage, potatoes, &c., (includ'g bare fallow as above,)	2.0	"
In clover, lucern and artificial grasses,....................	17.1	"
In permanent pasture,..	19.2	"
Total of the Farm, grain land and all, ...	100.0	"

And we should be keeping 5 horses, and a fraction large enough to cover a well grown 3 year old colt; 9 head of cattle and a calf or two; 9 or 10 pigs, and between 80 and 90 sheep. How does this compare with the results of what is called with us good farming? If it was not that the New-York census of 1855 is well known to have been taken in a peculiarly bad season, it would have been worth the while to place the figures of some one of our counties, side by side with the foregoing; but we do not wish for the sake of a contrast to represent our farming as any worse than the reality. In 1859, considered as it was the best year for wheat, 1816 alone excepted, within the memory of our farmers, the writer has heard the estimated average yield of Onondaga and perhaps also of Ontario and Seneca counties, placed by good judges at not far below 25 bushels per acre; these three counties have something more than three-fourths the area of improved land which Norfolk contains, and probably but about one-tenth of this area was in wheat, both winter and spring, in the one case, while in the other the proportion of wheat lands was fully twice as great.

Although we have extended these reflections at the risk of tediousness and repetition, as the auctioneer sometimes "dwells" upon his figures in the hope of exciting his hearers to enlarge their ideas a little, there is scarcely any way of bringing a fact home to practical realization that more completely accomplishes the purpose than statistical tables, if only a fair hearing can be had for them. Let us now inquire farther in regard to the general characteristics of Norfolk agriculture.

Charles II is said to have observed that "Norfolk should be cut into roads for all the rest of England." I do not know whether the remark was made out of compliment to the roads then existing in this county, or because he thought its light soil good for nothing else than to form a dry road-bed.

Coming into the County as I did, however, from Peterborough, through March, Wisbeach and Lynn Regis, the first that I saw of it, was that alluvial district, partaking more of the character of the Lincolnshire and Cambridgeshire fens, than resembling the more easterly portions of Norfolk. It was my good fortune to find a most obliging acquaintance and guide in the train that morning, who pointed out to me several "steamers," where this power is in use in pumping or otherwise promoting the drainage of the land. The soil, according to Mr. Read, is here mostly a layer of peat from 2 to 20 feet in thickness, resting fortunately upon a substratum of clay—fortunately because it is by *claying*, as well as by draining, that this peat can chiefly be rendered productive, some of it being so light that "on losing the water it blows away." Extraordinary dressings of clay, marl, chalk, and in some cases sand, have been applied, "from one to two and even three hundred loads per acre;" and it is rarely if ever considered possible to apply too much, because the more the peat is consolidated the better, and because any excess of lime, "which would be injurious on uplands," can expend itself here "in converting the superabundance of vegetable matter into fertilizing substances."

In reclaiming these fens some bad mistakes appear indeed to have been made. Draining the peat simply, is of no avail. Clay, marl or chalk, are necessary applications. Some of the peat that rests upon sand, so long as the water remains "within six inches of the surface," will produce a "rough sub-aquatic grass; take the water away and it grows nothing," and the channels made to drain it, have therefore been dammed up, but the money expended upon the process has not been so easily recovered. Indeed Mr. Read mentions the "prevalent idea that the fens are now drained too much," although he considers it well founded only in exceptional cases like the above. He also states that the "drainage was begun at the wrong end;" each proprietor was endeavoring to throw the water off from his own land, whereas if the mouth of the river Ouse "had been properly altered and deepened, thousands of acres that are now drained by steam, would have had fall enough for a natural drainage."

There is also in the southwest of Norfolk a "large tract of blowing sand," formerly "all rabbit-warren and sheep walk," and still described as poor and comparatively barren—of which I had a glimpse in returning from Norwich to London, after leaving Attleborough, and from Thetford to Brandon. Nevertheless, here as elsewhere the English farmer turns what he has to the best account; these out-lying sheep-walks are of importance to the holders of arable farms, affording "in certain favorble seasons, a great amount of hard but healthy herbage for the large flocks which are the sheet anchor of the occupiers of these lands." Here the poppy, which I had seen so extensively blooming on the continent, is also a troublesome pest, in the wheat-fields particularly. By plowing the "ley" or grass land, early, and letting it lie for some time after a light rolling, the winter annuals get quite a start before the harrowing and heavy rolling take place to prepare the ground for wheat sowing. As early in the succeeding season as February, the field is well horse or hand hoed; the wheat, if buried, soon grows through its covering, while the poppy, which is as tender when young as it is tough in more advanced stages of its existence, is either pulled up or turned under, and after its eradication, together with the consolidation and manuring of the land, even a blowing sand produces fair crops of wheat, which is said to be less affected by dry seasons here than either barley or oats. Sainfoin is highly esteemed here—proving less likely to fail, or to suffer from drouth, than clover and other "seeds." Rye is sown largely for sheep feed, it is stated, I suppose to be eaten off before other grazing is ready; turnips follow advantageously, and are mainly fed to fatting sheep, while after the rye is used, "the sainfoin and other layers, with a run on some of the sheep walks," supply the wants of the breeding flock, and, when finally the lambs are weaned, they continue during the day to keep well on the heather, and at night are folded over the "ley ground for wheat."

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* Neither the soil or climate of Norfolk suits oats very well. and "the yield is insignificant," says Mr. READ, when compared with the averages of barley and wheat.

The experiment has recently been made of planting belts of firs across these open sandy districts, to break the wind, and I judge from Mr. Read's remarks, quite successfully.

The best soil of Norfolk lies to the north-eastward of Norwich—a "free working loam of capital texture and great depth." There is also a strip of still stiffer loam running from the southeast to the middle portion of the county—not stubbornly stiff, however; requiring drainage, but with good management favorable both for sheep and for all the grains. The two improvements that have taken place here, Mr. Read observes, are a greater growth of roots, and better draining. Bush drains are of ancient date, and still somewhat in use, although pipe are now most common; the ordinary depth heretofore has been from 2 to 3 feet—"now the general depth is 3½ feet, or from that to 4 feet."

To complete our glimpse at the Norfolk soils, we should not omit to mention the other marshy district that skirts the rivers Yare and Bure in the east, where windmills are largely used for draining, and where grass is the chief product. It will thus be seen that there is quite a variety of surface in this one county—that on which its most noted improvements have taken place, and which forms the most extensive and important part, I have reserved until after enumerating the others, for it is there that my time was chiefly spent, and of which I have therefore the most to say. One difference between it and the richer land in the north-east is, that it bears more forcing without producing straw instead of grain; indeed it is said that while the appearance of a field in the one will lead to an over-estimate of the crop, a stranger travelling in western Norfolk will often place his figures four bushels below the actual result obtained. "The general appearance of the country," says Mr. Caird, "is flat and unpicturesque to the eye of the tourist, though the experienced agriculturist will find much to admire in the large, open, well cultivated fields divided from each other by straight lines of closely trimmed thorn hedges, and tilled with garden-like precision and cleanliness." It is an "expensive style of agriculture," as Mr. Read calls it, that one finds here; and the soil, naturally weak, is of that kind "that if farmed badly, will ruin any man," but so long as those results with an account of which this chapter was commenced, are here accomplished, it is worth some time and study to look into the means that are employed to produce them.

The story of the improvements wrought out by Mr. Coke, afterwards the Earl of Leicester, has been so often told, that we shall not care to recount it here at length. Finding his tenants throwing up their leases at $1.25 per acre when he came into the estate, he was able finally to command a rental of $5 and $6. It became his object to secure the best of tenants, and through their enlightenment to develope the agricultural resources of his property, because he soon found it to require a degree of personal supervision which no one man could possibly bestow. At the Holkham sheep-shearings, he invited leading practical men to meet his tenants and himself in discussing his measures; it was found an essential pre-requisite that *more stock should be kept*, and to this natural source of increasing fertility was added the application upon the surface of the marl which was found to be underlying it almost everywhere. Then came Art, scattering rape-cake as a fertilizer for the wheat, introducing clover and artificial grasses, and thus enabling the farmer to keep better live stock, while at the same time enlarging his production of the cereals. The Devons and South Downs were accordingly brought into the county and the four-course or Norfolk system of husbandry was established.* The wise and far-sighted views of Mr. Coke not alone effected these immediate changes: but, by the liberality he showed his tenants, and the spirit of improvement he fostered among them, the future as well as the present was embraced within the sphere of his influence; and, although passed away from the scenes of his exertions, his example still survives, and is conducive of farther progress not only there, but wherever in other counties the better systems are supplanting the worse.

We shall resume hereafter the subject of Norfolk agriculture.

CULTURE OF CURRANTS.

I would be glad to see in your paper, a complete article on the cultivation of the currant. I got some plants from Toronto last fall, called White Grape and Red Cherry currants, and would like to know how to treat them, and what sort of soil is best for them. J. D. W. *Kingston, C. W.*

No fruit will more certainly grow under adverse treatment than the currant—or to use the quaint phrase of our facetious friend Brooks of Wyoming county, which will "stand grief" better. Planted under the fence of a neglected and weedy garden, or enveloped in tall grass, and never pruned, currant bushes still continue to afford yearly crops. But these crops are very puny fruit—such as they are, however, they are better than the owners deserve, who ought to be willing to devote to them a small share of the cultivation which other crops receive. For no fruit is more improved under right management than the currant. We have known the berries to be increased at least ten to twelve times in size by pruning, manuring, and cultivation. The annexed cut is an exact representation of the size of common red currants grown on neglected bushes, and on those under proper treatment. (Fig. 1.) Those new varieties, the Cherry currant, which grows five-eighths of an inch in diameter, and the White Grape, which is often an inch in diameter, when both are fairly treated, often greatly disappoint purchasers, who totally neglect them, when they become but little larger than other sorts.

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* In this summary I have followed the outline presented by Mr. Caird in his Notes on English Agriculture, already frequently referred to.

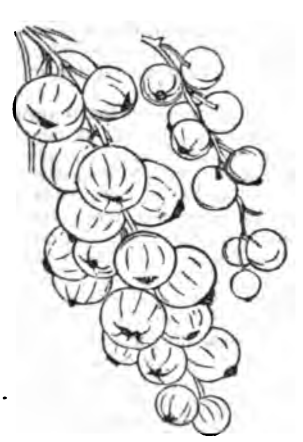
Fig. 1.

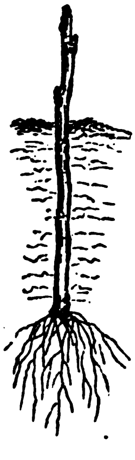
Fig. 2.

The currant is propagated by *cuttings*. A one year's shoot is taken, seven or eight inches long, cutting it off close to the old wood, and set about two-thirds of its length in the earth, which is closely packed about it. As roots are apt to be thrown out at each bud, all the lower ones are taken off. (Fig. 2.) It will make a good well-rooted plant by autumn. Scarce varieties may be layered at midsummer, if growing rapidly, and will root the same season.

The bushes will grow in any good soil. It should be kept rich with frequent manuring. The ground must be kept clean and mellow, the same as for a cabbage or hill of potatoes. The best way, both for facilitating cultivation, and for neatness of appearance, is to allow but a single stem to grow at the surface of the ground, the branches spreading out into a regular head a few inches up. These branches should be kept thin by pruning, or at regular distances, so as to admit air and sun to the leaves and branches in every part. If the growth is allowed to become dense and thickly shaded, the fruit will be smaller, of inferior flavor, and less in quantity. As the branches become old, they should be cut out, and new and vigorous ones, which have been allowed to grow for this purpose, take their place—somewhat similar to the renewal pruning of the grape—but with this exception,—that while the grape bears on the present year's wood from last year's shoots, the currant bears on shoots one year or more older; hence the renewal should not be so frequent. Some skill must be exercised, when shoots are left for new branches, to leave them on the lower parts of the bush, in such a position as to fill up regularly the future vacancies.

Bushes preserved, as here described, in the tree form, or with but a single stem at bottom, lose their vigor in a few years, and should be replaced by new plants, which will give larger fruit. But if allowed to grow in the bush form with several stems springing up from the earth together, they may be thinned out and pruned at the surface in such a manner as to afford a continued succession of new branches with roots, to take the place of the older portions as they are successively cut out. This, therefore, although not so perfect a mode as the tree form, is well adapted to ordinary culture, where it may prove inconvenient to make new plantings frequently. But successive pruning and good and enriching cultivation are especially necessary.

Varieties.—The common red and white currants, as we have already remarked, are capable of great improvement by pruning and cultivation. The *Red* and *White Dutch* are much like these, but the bunches are much longer, and they are consequently greatly preferred. The *Cherry Currant* is the largest red variety, (Fig. 3,) being usually about half an inch in diameter under good culture, and five-eighths with the best management. It is a vigorous grower, and was formerly supposed to be a poor bearer, but this has proved to be a mistake. A row, thirty feet long, three years planted, bore last year one bushel of fruit. The *White Grape* is perhaps the largest white sort —being usually nearly half an inch in diameter. (Fig. 4.) It is not a very vigorous grower, and is of rather a spreading habit. The *Victoria*, a late, rather acid sort, has long bunches and red berries; under good culture they are quite large, but if neglected, no larger than the common red currant. *Knight's Sweet Red*, is light red, and rather insipid but not sweet. *Prince Albert* is a rather new variety, a vigorous grower, fruit red, quite large, late in ripening, productive and valuable. The *Versaillaise* is a new sort, deep red, very large, next in size to the Cherry currant, and productive—but its merits are not yet established. The *Black Naples* is the largest of the black varieties, but its strong musky flavor is agreeable to but few.

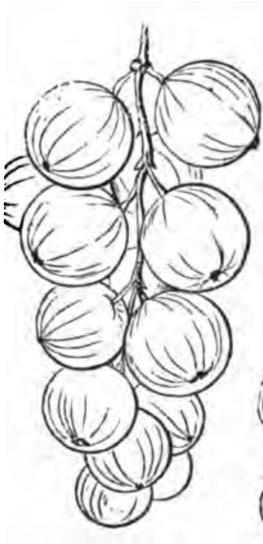
Fig. 3—Cherry Currant.

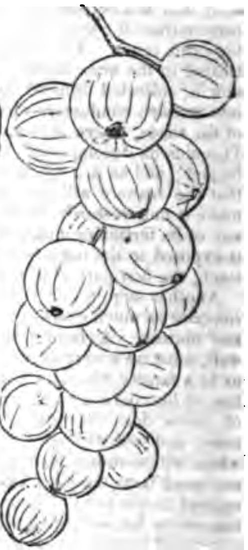
Fig. 4—White Grape Currant.

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Worms in Horses.—A correspondent of the Southern Cultivator recommends copperas as a remedy for worms in horses. He administers a tablespoonful, pulverized; in three or four days the dose is repeated; the horse is relieved of the worms at once—eats and thrives, and his hair becomes sleek.

Hay Required to keep a Horse.—A correspondent of the Wisconsin Farmer, who has given careful attention to the subject, says that five pounds of hay at a feed, or fifteen pounds per day, with twelve quarts of oat meal, or its equivalent in shorts, will keep a good sized horse in fine condition for all road or farm work, and is amply sufficient. Some will keep on considerably less; this, however, is a fair average.

[For the Country Gentleman and Cultivator.]

How to Make Farming Pay---III.

Another step towards rendering farming a paying business, was then, as it now is, the adoption and carrying out of a renovating system. My idea was, that if twenty tons of grain and straw were removed from a field, not less than that number of tons of good manure must be returned to it. To carry out this theory, my stables and barn-yard were so arranged and constructed, that no manure, either liquid or solid, was lost. The manure from the horse stalls, instead of being thrown out in a heap, where it would soon heat and become fire-fanged, was taken on a wheelbarrow from the stable and scattered about the yard under the open sheds. The manure from the cattle stalls was treated in the same manner. The liquid manure was, and now is, collected beneath the stable floor, and pumped into wooden conducters which carry it to any desired part of the sheds, where it is absorbed by the stable manure. This aids its decomposition and keeps it from being fire-fanged; and as it is all under shelter, there is no danger that the manure will be saturated with water, so as to make it unnecessarily heavy to haul out, nor will it lose any of its fertilizing qualities by leaching. When manure is exposed to the influences of the weather, where it can leach, the *best* part of it is always carried away first.

Another step in carrying out a renovating system is, to *consume* as much coarse grain as possible, in making beef and mutton. A farmer, in order to make farming pay well, must be a *consumer* as well as a producer. Point us to a farmer who does not consume, yearly, a good portion of his coarse grain in making beef and mutton, and of course does not make a good supply of barn-yard manure, and we will point out a system of management which will soon impoverish and ruin, for one generation, any good farm, unless a vast amount of foreign manure is applied to the soil. Every farmer should make his own manure as far as is practicable. It is a most ruinous policy to expend large sums, annually, for foreign manure or for any kind of fertilizers, when all the available substances of a farm are not wisely used up in making manure in some shape.

One of my first steps towards renovating my farm, when I commenced farming, was—and I have never abandoned it—to keep as many steers or bullocks during the winter as I could conveniently, so as to consume all the coarse fodder and coarse grain, ground into meal, that could be used up economically. Of course, my cattle have always been fed in stalls, and nothing is wasted. I always endeavor to have all their food palatable, and make them eat everything up clean. And while multitudes of farmers aim to keep their stock during the winter on the *least possible allowance*, my aim is to make them eat as much as I can, by feeding a variety of food *every day*.

It is by no means an economical way to consume fodder or grain of any kind, by feeding only *one* kind at a time. Some farmers confine their stock for a long time on cornstalks, for instance; and then keep them on hay for a number of weeks, and then switch off on to straw, or something else. Stock of all kinds experience a very great inconvenience many times, from such changes of food; just as a man would whose food for one month might be mush and molasses, and the next month nothing but wheat bread, and the next month bean broth, or beef soup, or nothing but potatoes, squash, or something else.

There is one very important consideration in feeding animals—and this is all intimately connected with my subject—which not one farmer in a hundred ever thought of, until it has been pointed out to him, which is, *mingling different kinds of food*, for the purpose of rendering a larger amount of the nutriment contained in them *assimilable*.

Suppose, for example, that a man were to subsist for one day on *beef*, the next day on *pork*, the next day on *beans*, and the next day on *wheat bread*. He will not feel as well, nor be able to labor as many hours each day, as he would if he should eat a portion of every kind of the food mentioned at each meal. Now, the true reason for the fact, is this: when only *one* kind of food is eaten at a meal, more or less of the nutriment is voided in the excrement, which, had it been brought in contact with other food during digestion, would have been *assimilated*, thus supplying the waste of the body or going to make fat.

So with feeding stock; if we grind together oats, rye, barley, and Indian corn, equal quantities of each, stock will derive much more nutriment from the meal thus mingled, than they will if each kind is fed *separately*. So with feeding all coarse fodder. I have always found that I can make my stock *eat more*, by feeding cornstalks, hay, and straw, when well mingled together, than they will eat when each kind is fed separately; and more nutriment will be assimilated when thus fed out, than if they are not mingled.

There will be much nutriment voided in the excrement, even when we exercise all possible economy in mingling and feeding the produce of the farm. Consequently, everything that has not been assimilated by animals should be carefully deposited in the soil, where it will build up a crop of grain or grass for the succeeding year. For this reason, all manure should be sheltered; and I am satisfied that it pays quite as well to protect manure as it does to protect stock. The better an animal is kept, the more valuable will be the manure, and the better it pays to protect it from the influences of the weather. The ordure of cattle, which consume several pounds of any kind of meal per day, will be worth twice as much as a fertilizer, as that is from very poor cattle, which are compelled to subsist on straw and fodder that is not very nutritious.

I have always considered raising stock one of the most important steps towards making farming pay. But when a man computes *appearances* in the matter, and is always influenced by what seems to be the *present cost* to produce a given result, his farm will soon become impoverished and ruined, and his stock will seem more like the "lean kine," spoken of by Moses, (Gen. 41:19,) than like the stock of a thriving farmer.

In the autumn of 1848, I had a lot of rather good steers, two years old, which I wished very much to dispose of for needed cash; but no one was willing to give me $25 per head for them. I had but little hay that season, and but a limited quantity of cornstalks. Every one who came into my barn and saw my fodder and the number of cattle, would shake his head, and say, if you keep all those cattle until spring on this quantity of fodder, I would like to see them, &c. One good old farmer, who now rests from earthly toil, when he saw how much each animal received, said: "It is a piece of consummate folly for you to feed your animals so much. You will never see half the value of what you feed." And then went on to tell how *he* kept *his* stock, &c., without feeding any meal or hay until towards spring. I kindly told him that if I could not make such an operation pay, I would have the satisfaction of doing *one* thing as it ought to be done. Now for the result.

Those steers received, night and morning, a bushel each of cut straw, cornstalks, and a little hay cut with it, and about two quarts per day of corn and oat-meal, mingled with the straw after wetting it. Towards spring the quantity of meal was increased to about four quarts per day. Each steer consumed about twelve bushels of meal, which would then have sold for about forty cents per bushel—say $5 worth of meal for each steer. I managed to have a field of early pasture, sufficiently large for the cattle to fill themselves, before most other people had even *thought* of having pasture. Each steer received as much meal for two weeks, when *in the pasture*, as he did before they were allowed to feed on grass. After they had run to grass two weeks, I received fifty dollars per head for them; and they made a large lot of excellent manure, which increased the grain crop of my farm full one-quarter *more* than there would have been *without* manure. I will not stop to foot up the account, to determine whether or not "it paid," for the data are before us. Fifty dollars per head was then thought to be an exhorbitant price for such steers. Such has ever been my system of management; and it has always seemed to pay so well, that I have followed it from year to year, and when distributing seventy-five cents worth of meal among a few calves per day, or among any other stock, this question often arises, "*will it pay?*"

Experience always answers, that if a calf or steer be fed during the winter, five or six dollars worth of meal of several kinds of grain, in *addition* to the straw and other fodder which he eats, he will be worth in the spring, enough more to pay for the meal he has eaten, than he would have been without having eaten any meal. And besides this, the good effect of the meal will be seen in an animal until the next winter, just as the effect of manure on a field is seen from year to year.

A neighbor of mine spent a day with me, a few days since, who, seeing the meal, and cut straw, and turnips, which my cattle received, laughed heartily at me when I told him I fed everything regularly, three times per day, in order to induce them to eat *all they would*. Said he, my practice is directly the *reverse* of yours: "I endeavor to have my cattle live on *as little* as they can."

As this respected friend takes no agricultural paper, I have no hesitancy in penning what I replied to him—that such a system of feeding would never do *for me*, nor for any other farmer whose aim is to make farming a paying business. This esteemed friend scouts at everything which is published on agricultural subjects, and if a friend supplies him with the best of agricultural reading, gratuitously, he will not read it. But mark the difference.

He commenced farming on *new* land, and mine was *old*, impoverished land. *He* never believed it will pay "to make such a fuss about manure," nor to make animals eat all they will in winter, &c. Now, to sum it all up briefly, *he* complains that, "for some *unknown* reason," his crops of all kinds "*seem to be rather lighter* from year to year," while I *know* that my crops *increase* every season, and I shall be greatly disappointed, if my fields do not produce more the coming season than they ever did before.

S. Edwards Todd.

Tompkins Co., N. Y.

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[For the Country Gentleman and Cultivator.]

DEEP PLOWING.

Messrs. Editors—Almost everything in this country seems to run into extremes—whether it is fashion or farming, politics or religion. The disposition of our people tends to be extravagant in all things, if they can get the means to become so. Some agricultural writers incline in the same direction, and would not a more "conservative" tone in many respects be more conducive to our prosperity? Many of our journals have for a long time rode hard the hobby of deep plowing—"plow deep" has been their motto, no matter what the soil may be—some recommending from 12 to 14 inches as the proper depth, while our famous "Professor" insists that three feet are little enough, but our farmers are generally cautious, and but few have been deluded into doing a thing that, on many farms, would be perfectly ruinous. I admit that on some soils a small portion of the subsoil plowed up and mixed with the surface soil may be beneficial—particularly if a large quantity of manure is added at the same time—and on bottom lands no injury can result; but I caution farmers to be careful how they turn up and intermix clay with the surface soil—it may do sometimes, but the contrary is the rule. You say—page 14, current vol. Cultivator—that "deep plowing is most beneficial to stiff clays, and, as a rule, we may plow deep when the subsoil is of the same character as the surface soil." I greatly question the first; the latter is no doubt true.

I know a farmer in this town, who had a lot of rich land near the sea, to which he thought too much sea-weed had been applied, and as deep plowing was so much recommended he would try it upon this lot. So he put in his plow and turned up a few inches of clay—the subsoil was a stiff clay. The effect was his land was that season like mortar, (as he expressed it;) he got no crop from it that season of any account, and but little the next, and I am informed it has not since produced as well as before. If the surface and subsoil are the same, as you say is sometimes the case, turning up the subsoil to a moderate extent may do; but if, as in this case, the surface is loam, and the subsoil pure cold clay, it is ruinous.

"Deep plowing and high manuring produce profitable results." Which, the plowing or the manuring? Try the manuring, with a depth of plowing suitable to the soil—not plowing up clay or yellow loam—and my word for it, it will be found the most profitable.

I know a farmer who is a large and successful grower of Indian corn, (his subsoil is a yellow loam, surface flat and free from stone,) who insists that five inches is the proper depth to plow for that crop, and no deeper, and he says experience has taught him this. He certainly always raises extra good crops, which after all is the true test of good farming.

J. G. C.

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[For the Country Gentleman and Cultivator.]

African Poultry--New Way of Raising Chickens.

Messrs. Editors—The amusement, delight and instruction, weekly derived from the well filled pages of my welcome visitor, the Country Gentleman, and the freedom which each one seems to have to its columns, induces me to offer to add my experience to that of others upon the subject of raising poultry—a subject associated, in my mind, with domestic quiet, and at all times fraught with many happy reflections.

My lot consists of two cocks and fifteen pullets, brought from the coast of Africa, in the early part of January, 1859. In color they are dark blue dominiques, with bright yellow legs and bill. In point of beauty I have rarely seen them equalled, and never surpassed. As layers and setters they are as good as any. On or about the 20th of March following their arrival, they commenced laying in a warm, dry, and above all clean house, made entirely of sassafras timber—(upon which, by the by, lice cannot, or at least will not, live.) The stables for my carriage and saddle horses were adjoining, so that an unlimited supply of worms and maggots was at hand, found in the manure. They had access at all times to troughs filled with corn, wheat and barley mixed. Confinement was unknown to them. Their range was over the cotton field and horse pasture of ten acres. Of one thing only were they deprived—their young. These in two or three days after being hatched, or as soon as they were strong enough, were given to a capon, for the reason that he can be made not only a better nurse, but that he would father or mother, as you please, any number of chicks of different ages. The hens too, soon forget their young and return to laying. One of my capons has had following him at the same time as many as a hundred and fifty, no twenty of which were of the same age. In fact, while some were large enough to broil, others had left their shells but a few days. The same fellow is now clucking to fifty, and will get as many more as soon as they are hatched.

Now for the result of the year. From 15 hens I raised 1,374 chickens—478 being males—470 of them soon found themselves capons, worth, at six months old, 50 cents each. Of the remaining 896 pullets, 150 were kept, and the rest disposed of at an average price of 25 cents—making the handsome sum, not counting those kept for my own use, minus $40.00 for food, and $30.00 for attention, of $351.50. Many eggs, of course, were used for household purposes—the exact number I do not know. The pleasure of watching the growth and progress of these birds was worth treble the money. An overseer attending to the plantation, many hours of leisure were left me to devote to this small but pleasant experiment.

Shall I or not prepare myself to report the result of the coming year?

If a few of your correspondents would like to get them, so as to try them in a more northern climate, it would be a gratification to me to send several pair. In fact, as they are not raised for sale, but for pleasure alone, ten or twenty couples would be most willingly given, with the condition, however, that at the end of the year the results be made public through the Country Gentleman.

Wm. P. G.

Ridgeland, Washington Co., Miss.

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Live and Dead Weight of Cattle.—Eight lbs. out of every 14 lbs., or four-sevenths of the whole live weight of sheep and cattle, represents, when the animal is properly fat, the net weight of the fore quarters, exclusive of offal—three-fourths of the live weight of pigs, if fat, represents the weight when dressed; but pigs have frequently been killed of which the offal was only one-fifth their live weight and even less.

Farm Improvement—III. Keeping Stock.

Improvement based on More Manure, and hence More Stock—Or rather, Better Kept Stock—The Coarse Grains should be Fed Out not Sold—John Johnston on High Feeding and its Results—Delafield on Reform in the Treatment of our Grass Lands—Seeding Down before Running Down—Top Dressing, etc.—Wintering Stock on Corn-Stalks—Stock Barns Wanted—The Lesson of the Scarcity of Fodder may be a Valuable One.

The Improvement of the Farm, as shown in our previous articles, depends to a great extent upon the amount of manure annually applied to the same, and we have already hinted that keeping stock presented the best means of cheaply securing efficient fertilizing material. It is our present purpose to offer a few thoughts on some of the best methods of increasing the forage product of the farm, and thus compassing the end desired—an increased capacity for stock-feeding—and hence an increase of manure and greater fertility and productiveness of the soil.

We must premise here, however, that an increase of stock is not, as a general thing, as necessary at first as an increase of feed and care. Were cattle and sheep fed higher on the majority of our farms, they would not only thrive more profitably, but would produce more and better manure, and thus help on the enrichment of the farm, and enable an increased number of animals to be kept on the same. As we have said before, we must feed out our coarse grains upon the farm if we would make them productive; it will not answer to starve our stock that we may have a little more corn, barley, oats, or roots to sell—we starve our land thereby, and reduce our means of making good and profitable crops from the same. "High feeding," says John Johnston, "will make higher manuring, both by making a larger quantity and a much better quality. * * It *pays*, thoroughly to feed young cattle and sheep, so that they are worth more at two years than an immense majority of the cattle in this State are worth at four years old.* * * *Manure is the one thing needful*, after underdraining, for making *profitable farming*."

But to return to the ways and means of increasing the capacity of our farms for stock keeping. Years ago the late John Delafield, Esq., told the farmers of New-York that a *reform* must take place in their treatment of meadows and pastures, before they could breed or fatten cattle and sheep to the greatest advantage. It is equally true at the present day. In "seeding down" we are are often too sparing of grass seed—we delay the process too long, until our fields are too poor to give a "good catch" or product of grass—and we neglect to top-dress with plaster, ashes, etc., even when we know them to be largely beneficial. There must be a reform here. We must have our land in good tillage, and seed down while the field is still in good heart, with plenty of seed; and top-dress in all cases when it has been found to prove beneficial; then we shall get a full crop of grass for hay or pasture, and our acre of land so treated will bear double the stock, yea, quadruple which our common pastures now feed. And their fertility may be kept up by care in feeding off, neither unseasonably or unmercifully, and occasional applications of manure—fine compost applied early in the fall, and well harrowed, with another sprinkling of grass seeds.

We can winter more stock, without increasing the area of our meadows, if we give the latter good treatment, as above indicated, and thus increase their productiveness, by providing liberally of cornstalks as a substitute for hay in feeding cattle. Farmers are turning increased attention to the corn crop, as a means of keeping stock better and more cheaply than by depending on hay as largely as formerly. With a good supply of well-cured cornstalks and a portion of the grain grown upon the same, we can bring our cattle through the winter in good order without any recourse to the hay-mow. It is true, however, that it requires more labor to grow the corn than the hay; but it is also true that the increased value of the former will pay well for the greater labor necessary. It is true also, that to get the greatest benefit from feed of this character, the preparation of cutting and steaming is requisite, as well as the grinding of the grain; but stock may be well wintered, with a little more corn, without either of these processes.

We can winter stock most cheaply when supplied with good barns and sheds, with all the means and appliances for their shelter and comfort, and the preparation of their food, and all the conveniences for saving and composting manures; and some attention to these requisites is of prime importance. These subjects have already received considerable attention in this journal, so we will not extend our remarks in this connection.

The scarcity of winter fodder this season, has done much toward inculcating proper ideas of the economy and value of fodder, and if well pondered, will enable our farmers to keep more stock at a greater profit than heretofore. The real value and uses of straw, the policy of cutting and steaming coarse fodder, and the benefits of feeding grain and roots, willl be better understood and appreciated than they have been, and better provision will be made for husbanding every resource of this character and applying it to the best advantage. This will all tend to extend our Farm Improvements—and on the reliable basis of *more manure*, the advancement must be certain and permanent.

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[For the Country Gentleman and Cultivator.]

CORN RAISING IN PENNSYLVANIA.

Messrs. L. Tucker & Son—The following statement of a crop of corn, raised in this neighborhood last year (1859,) was furnished to me at my request.

The crop was raised on land belonging to Mr. Samuel Isett, and the account kept by Mr. Gifford, his manager, not with the view of having it published, but in their regular business operations. I having heard of it, asked a copy of account to send you, so that a voice may be heard from the interior of the old Keystone State.

CORN CROP—DR.

To interest on 38 acres @ $50 per acre @ 6 per c.,		$114 00
taxes on land,		18 00
35 days plowing, breaking up ground,		70 00
8 " harrowing, preparing ground,		16 00
6 " scoring and planting,		36 00
6 bushels seed corn,		4 00
89 days plowing corn,		58 50
89 " setting up and weeding corn, (by boys),		15 60
108 " husking corn,		92 70
Hauling corn from field		40 00
1 ton plaster and plastering corn,		12 00
Total,		$476 80
CONTRA.		
By 2100 bushels corn, @ 50c. per bush.,	$1050 00	
10 loads fodder @ $3 per load,	30 00	$1080 00
Profit on crop,		$603 20

The corn was all cut off at the ground, and put up in shocks, as we call it—which will account for so much time required in husking. JAMES M. KINKEAD.

Blair Co., Pa., March 22, 1860.

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DUTCHESS CO. AG. SOCIETY.—Officers for the year 1860:

President—JAMES HAVILAND, La Grange.

Vice-Presidents—Geo. W. Coffin, Amenia; Wm. W. Haxtun, Beckman; Thomas Doty, Clinton; Valentine H. Hallock, Dover; Edmond Stockholm, East Fishkill; Philip Vanderbilt, Fishkill; Wm. B. Dinsmore, Hyde Park; James Howard, La Grange; B. B. Brothwell, Milan; David Bryant, Northeast; William Akin, Pawling; Anth. Hoffman, Pine Plains; Geo. L. Dennis, Poughkeepsie; Ira Howland, Pleasant Valley; Abram Staats, Red Hook; C. S. Wainwright, Rhinebeck; Alfred Mosher, Stanford; George Duncan, Union Vale; Milton Ham, Washington.

Secretary—George Sweet, Washington.

Asst. Secretary—John U. Able, Union Vale.

Treasurer—John C. Halsted, Clinton.

Winter Farming in Albany County.

It is sometimes forgotten, in reading an outline of the practice of one farmer, that seldom if ever can it be regarded throughout as more than a general guide in the operations of others. And although every thoughtful reader desires to obtain all the details he can in such an outline, it is in order to study more thoroughly and comprehend more exactly the basis on which success has in one case been dependent, and the measures by which it has there been actually secured, rather than with any design or hope of putting himself in precisely a similar position, and working out again precisely the same results.

Thus the Calling of the Farmer, is eminently one that exacts mental exertion in the development of its resources. He can rarely walk advantageously in the exact footsteps of his neighbors. His best path toward the same ends may be very different from theirs, but their course is not the less instructive, if he learns from it the principles by which everywhere it is really guided, and the modifications, which, in other circumstances, their application requires. The skill of a good carpenter will last him under another sky: *cœlum, non animum mutatur;* but it is a new study with the farmer in every new locality to which he goes, to adapt to his new condition the experience elsewhere gained, and the old laws that probably underlie the successful agriculture of every clime and kindred.

Now one of the prime lessons which we shall be inclined to draw from English Agriculture, if, before our "Foreign Notes" are drawn to a close, the opportunity offers of directing some attention to an examination of them—will be that our farmers should devote themselves more to the feeding of stock as an agent of improvement, whether it is or is not in addition a direct source of important profit.

Those who have thus far followed the accounts of English farming that have appeared from time to time in the correspondence of the COUNTRY GENTLEMAN, will have noted how all the results it accomplishes appear to hinge in some way upon this support; and farther examples may hereafter be given, illustrating with additional variations the correctness of that homely maxim which embodies in few words the results of long experience abroad, every day receiving new verification in the practice of our best farmers in this country, "No cattle, no dung; no dung, no corn."

Any system of stock-feeding moreover, which will tend in some degree to equalize the labors of the year by carrying into the idle months something of the over-burden of other seasons, is especially an object in our climate. And as an instance of *winter farming*, what has been said will prepare the way for a brief notice of the operations in sheep feeding of a reader in Albany county, Mr. JURIAN WINNE, of some of whose stock we have heretofore presented an engraving—operations which furnish another example of the truth of the maxim quoted. It may be well in addition to the remarks with which we commenced, to call attention, before proceeding any farther, to one other prefatory suggestion.

It has been objected to the practice of one of our most experienced contributors, that after all he only owes what success he has obtained to a peculiar *knack* in picking out cattle it will pay to feed, as if it was by no means a part of the farmer's regular business to acquire just this "knack" in judging of any kind of stock the farm produces or supports. What may be here and there a natural gift, might become far more generally a matter of acquisition. It is precisely in such points as these that farmers should endeavor to derive more benefit from our Agricultural Shows. And the managers of our Agricultural Colleges should not overlook the necessity of securing thoroughly qualified judges of live stock as assistants in the practical part of the instruction they are to convey. No one can attain success in this department of farming, except by skill in the selection of his stock as well as in the management of his resources, and new beginners should content themselves with an experiment at first upon a moderate scale.

It is five or six years since Mr. Winne first fed fifty sheep one winter; in 1858 he fattened some 200; about 330 in 1859, and this year he has carried the number to 500. He occupies a farm of a hundred acres, of which there are perhaps 75 under the plow. Of this there were in 1859 about

14 acres in oats,
7 acres in rye,
34 acres in meadow,
7 acres in pasture,
10 acres in corn, potatoes and buckwheat,

The product of the whole will probably be consumed by the stock—indeed most of it has been already—including 850 bushels of oats and 67 loads of hay. During the season there had been purchased 500 bushels of peas for feeding, and 100 bushels of buckwheat; also ten or twelve tons of oil cake, the latter costing him only $31 per ton, although seldom to be had, we believe, for less than $35 to $40. About half an acre each of carrots and mangolds, yielding some 1100 bushels altogether, had been grown. The rotation in common use is corn, potatoes, and buckwheat, followed the second year by oats, and the third grass, the land then continued under sod three or sometimes four years.

The stock on the place included two pair of horses, five head of cattle, and a store flock of two rams, seventeen ewes, four wethers and half a dozen lambs; besides thirteen ewes now away from home. During September and October Mr. Winne had also bought in the sheep for feeding, 507 in number, of which two head have been subsequently lost, leaving 505 as the present number in his feeding sheds.

The extent of accommodation which he finds necessary for sheep, may be inferred from the dimensions of one or two of these sheds. There is one for example 21 by 36 feet, with a narrow yard along the southern side 6 to 8 feet wide, where a lot of 75 sheep were thriving very nicely. A board on the north side near the bottom, is hung on hinges, and remains open for the admission of fresh air except during the most severe weather. The whole south side along the yard is open; but provided with two or three sliding boards to restrain the sheep under shelter when necessary. Others of the sheds have much larger yards, and others no yards at all. But Mr. Winne is careful in any case to provide amply for ventilation—for the admission and circulation of the atmosphere—a point justly considered of the greatest importance, while if it is sufficiently attended to, yards do not seem to be necessary—the sheep evidently thriving quite as well without them as with them. When yards are provided, however, the same amount of shed room will answer for a somewhat larger number of sheep. Seventy sheep were kept in a lean-to 20 by 46 feet, with no yard, ventilated by an open board along the side as before, and two trap-doors of considerable size in the roof, opening and shutting at will. This shed might have contained five more sheep without crowding; in that case allowing about 12½ superficial feet to each sheep, while in the shed with the narrow yard attached, 10 superficial feet under shelter had been quite enough.

To speak of the space allotted for a sheep, without saying anything of its *size*, is almost as definite, however, as it would be to talk of so many "pieces of chalk." And still we confess that it is not entirely without apprehension that we approach this necessary point. The weights of these sheep were all accurately taken down, one by one, partly upon the 3d of January last, and partly upon the 6th; a second weighing, with equal care, was made the 3d of February: so that we are not proceeding upon estimates or guess-work; although, knowing the incredulity with which a statement of the average was received by a dealer in New-York to whom it has since been made, we might perhaps hesitate to publish it except upon personal knowledge.

In January 504 of the sheep weighed 72,198 pounds aggregate, or an average of 143¼ pounds each. February 3, when the whole 507 were weighed, the aggregate was 76,273, showing an average of about 150¼ pounds per head, or a gain in an interval of less than 30 days with more than half the number, and just a month with the remainder, of 7¼ pounds per head throughout. About six weeks had elapsed since the last weighing at the time of our visit, so that 10 pounds per head would be probably no more than a fair average gain in this interval; and 500 sheep, as even in size and condition, and as handsomely fatted as these, *averaging* 160 *pounds per head*, are really quite a sight to see.

The evenness of the lot was not such, nevertheless, as to render a dozen of the best unworthy of a paragraph by themselves. There were thirteen which showed an aggregate, Feb. 3, of 2,955 pounds, or an average of 227⅓ lbs. per head—the lightest turning the scale at 205, and the heaviest at 252.

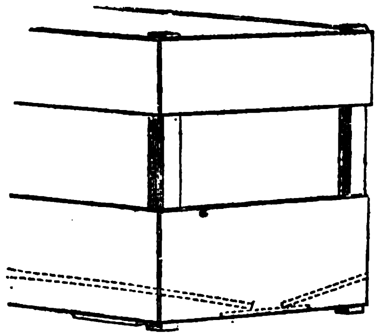
The sheep are Leicesters, and come from Canada, costing upon the farm, all expenses paid, a not extravagant price. Strongly in favor of grinding the grain fed to either cattle or horses, Mr. Winne does not think it either necessary or expedient with the sheep. Among the 500 head he distributes for the morning feed about eleven bushels of corn and oats in equal proportions, varying the amount slightly, according to the particular circumstances of the case, such as weather, &c. After this they are supplied with what hay they want, and subsequently with water. About 11 o'clock they get a supply of oat straw, which is this year very bright and nice, and relished by them as well as hay. At 1 o'clock two bushels of sliced roots per 100 sheep, are fed to them, and all their tubs and barrels are again supplied with water. The night food consists of 11 bushels for the whole, of peas and oil-meal, half-and-half. To contain their water, tar barrels are used, or if these fail, a little tar is put in with the water they drink. Salt is always accessible to them in one trough, and in another a mixture of two parts salt with one part ashes and a handful of rosin to two quarts of the above, with the addition sometimes of a little nitre.

With these precautions he has had remarkable success in maintaining the constant good health and thrift of the whole. The roots that are fed contribute to keep the system in order, rather than to add flesh, in Mr. W.'s opinion.

The manure remains undisturbed until spring, enough litter being added to keep the yards as well as sheds as completely dry as possible—a point not less important than ample ventilation. Last autumn thirty loads of leaves had been drawn and spread in the yards for this purpose, and are found to answer admirably. Straw is spread during the winter as necessary, generally twice a week, and Mr. Winne said that he would pay $5 per ton for it if necessary, sooner than have his yards wet. When the straw began to run low this spring, upwards of twenty loads more of leaves had been collected. He has also bought pine sawdust for the purpose, and likes it, and the chips, &c., as they accumulate, very much as a manure, upon heavy land.

There is also a bed of muck which he tried one year, putting it into the yards to the amount of 150 loads. As there are only about two weeks in the season when this deposit is readily accessible, it is not always convenient to take it out at that time, but Mr. W. expressed a high opinion of its value; he thinks it should be allowed to freeze and thaw through one winter, and become thoroughly dry in the summer before it is used under the sheep.

The feeding troughs in which the sheep receive all they eat, (except the salt,) are of simple construction, and possess some advantages worth a description.



Engraving showing End of Mr. Winne's Sheep-Trough.

The engraving shows the end of the trough, which is 22 inches wide. The lower board on the sides and ends is 12 inches wide, the upper board 8 inches. The length of the trough is 12 feet. The posts of timber 2 by 2¼ inches, are six in number, one in each corner and one at the middle of each side. In making the bottom, three bits of boards are nailed across—one at each end and one at the middle; a 12 inch board rests upon them, where it is securely fastened, and then two other boards are put in upon a bevel, as shown by the dotted lines, which represent their ends in the cut. The lowest part of the bottom is thus the thickness of two boards from the floor, while the two inclined bottom boards are about 3 inches higher on the outer edge than at the other. Such a box as this accommodates 20 large sheep; it is tipped over and thus cleaned in a moment, without any sweeping, and has been thought by several sheep men who have examined it, to be a very simple and inexpensive way of combining all the essentials in this much discussed article of shed furniture. It is made with good long screws, and will stand wear and tear admirably; if made with nails, they become loosened by knocking about, and constant tinkering is necessary. The space between the two boards that constitute the sides, it should be added, is ten or eleven inches.

When the sheep are first bought in autumn, they are pastured a while before they go into the sheds, receiving a half bushel of corn or peas per 100 head daily while in the field. If pasture is hired for them, the current rate has been about $12 per 100 head per month.

The land upon the farm is mostly a pretty heavy clay, but if well worked and kept dry becomes friable; one experiment in draining has been made with the best results, and Mr. W. proposes to drain a larger area the coming season. He likes to plow as soon as the oats are off, and goes to a depth of seven or eight inches. The ground then lies till the 1st to 10th Sept., according to season, when the manure is brought out and spread; it is turned in with a Share's Coulter Harrow about two inches, the rye sown and dragged in lightly, and then timothy seed, succeeded by another dragging. About the last of the next March or first of April, clover is sown. He likes to seed tolerably thickly; one field of about six acres, for instance, receiving in autumn a bushel and a half of timothy, and in spring a mixture of about a bushel and a peck —one-third timothy and two-thirds clover. No matter how high its price, true economy teaches him to buy uniformly the best and cleanest seed.

With the 330 sheep fed a year ago, there was, as might be supposed, a considerable quantity of manure provided, and an opportunity offering for purchase in addition, Mr. W. bought 150 loads, at a dollar per cord, which he deemed a very good bargain. The manure in the yards is heaped under the sheds as soon as the sheep go, and there protected from exposure. It will need turning to prevent fire-fanging, unless wetted from time to time, and for this purpose a cistern has been provided for the reception of liquid manure, and a force pump by which it is thrown over the heaps from time to time, before they are finally drawn out for use.

Such operations going on upon any farm for a few years cannot fail to be felt in enlarging its productiveness, while in addition since Mr. Winne has been engaged in feeding, prices have been such as to pay a good pecuniary profit. The markets scarcely promise returns so large this year, although we doubt if the produce of the farm could have been put to any other use so remunerating. A letter received from **John Johnston**, while these notes were in course of preparation, says: "Cattle won't pay for feeding this winter, unless they advance materially from present prices; in fact they must meet with a serious loss who have been selling of late, and what is worse, I fear the drovers have also been losing. Sheep generally must have paid for feeding; the high price of pulled wool has kept up the price of sheep. I seldom or never sold sheep higher per pound than this spring, but I fed higher and they cost me high; still they pay for what they have consumed, and I always allow the manure made by them to be worth a dollar per sheep."

A favorite food with Mr. Winne for horses, is rye and oats ground together in equal proportions, and mixed with cut hay wetted; it fits a horse for work, he says, better than anything else, and he believes four bushels of grain ground to be fully equal to five whole. As above stated, he also grinds and cuts the feed of cattle or pigs, but never for sheep—giving them straw and hay, as well as grain, in its natural bulk.

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A Hint.—It would be worth more than the price of your valuable paper, to many, to have their attention called to the fact that to pitch manure containing long straw or cornstalks, they will save much time and hard labor by cutting the heap of manure with a hay-knife, in the same way that we cut a cheese of pomace at a cider mill. This treatment does away with the objection to cornstalks in the manure heap—consequently to that of feeding them in the barn. P. P. Peckham.

Bradford Co., Pa.

[For the Country Gentleman and Cultivator.]

VERTIGO IN HORSES.

Messrs. Editors—A friend called my attention to an article in the "Country Gentleman" of Jan. 26th, viz., "Vertigo in Horses." The description given by "A Subscriber," corresponds entirely with a disease that prevails among horses in this vicinity, and for want of a better name, is denominated "Chest Staggers," but "Vertigo" is its real classification. The cause is a fermentation of food in the stomach, and the effect upon the animal very similar to that which is produced upon "bipeds" under like conditions of liver, stomach, &c., and the remedies to be employed the same. A dyspeptic man cannot eat Indian meal in any form—with impunity, neither can a dyspeptic horse—and whether it be raw or cooked, matters not in either case, inasmuch as the digestive agents in both cases are repelled by it—consequently fermentation follows, and cholic, vertigo, debility, &c., &c., are developed. I was once a confirmed dyspeptic, and after exhausting almost every resource for relief, finally became my own physician, and for twenty years have enjoyed uninterrupted health, partaken of my full share of "*good things*," and now stand firm in my boots, strong, 190 lbs. in bulk. I had a horse in same condition as the one described by "A Subscriber"—called in the aid of a veterinary humbug—eminent in his profession, who pronounced it an incurable case of "chest staggers," assuring mé that a horse once affected could never be cured; he would, however, try, and if in a few days there was no improvement apparent, I had better have him knocked on the head. No improvement was manifest—$10 out for *science*—and a horse I valued highly, pronounced fit only for use as a fertilizing agent.

I took the animal under my own special charge, watched every symptom, and thought he wanted to tell me that he felt just as I did when I was a dyspeptic, when I could not describe my own sensations. On examination I found his feet were cold—(mine were just so,)—his ears were cold, (so were mine,) his breath was sour, (mine the same,) his heart seemed to palpitate with undue force at one moment, and at the next was scarcely to be felt, (I had had the same,) and his breath did not inflate the lungs sufficiently to swell out the body as it ought, (I had the same experience,) and I determined in my own mind that my horse was living the same kind of death that I had risen from. I treated him for dyspepsia—cured him in three months—and for four years a healthier animal has not lived in Massachusetts, and since his case, have aided in restoring a dozen others to health that were similarly diseased. Now for the treatment—but first let me refer to the character of food he had been kept on. He came to mé, green from Vermont, where hay (and but an occasional feed of oats) was his ration. I placed him on cut feed, (hay and corn meal mash,) which he had a glorious appetite for, and on which for a year he seemed to thrive, although worked hard. Towards the close of his first year of *civilized life*, I noticed a degree of languor at times that was so entirely inconsistent with his ordinary elasticity of spirit, that I was apprehensive that all was not well with him. This was followed by the development described by your correspondent, and I refer to it as an incident in the association of cause and effect—but to the remedy. I cooked his hay by steaming, and instead of corn meal used fine feed—one quart to each feed of mash with twenty of the little Belladonna pills of Homœopathists, three times a day for three days, giving him water but once in twenty-four hours, and that late in the evening. I followed this with cut hay and fine feed (one quart at each feed three times per day,) and added a teaspoon of mustard seed for one week, then substituted ground oats with same quantity of mustard seed for fine feed in the mash for a week, all this time barely exercising him around the house. I then put him to his work, using double quantity of ground oats, viz.: two quarts to each feed, and from that time forward to the present, he has not lost an hour from his work on account of sickness, and weighs nearly 1400 lbs.; in fact, is esteemed one of the best working horses in the State. R. F. S.

[For the Country Gentleman and Cultivator.]

BALLOON FRAMES—III.

The Balloon Frame is one of those innovations, which, like the sewing machine, the husking machine, and the apple-parer, is destined to put an end to those social gatherings, which, in by-gone days, assembled to accomplish by united efforts that which by the advent of machinery is now performed with far greater ease and rapidity.

Balloon Framing is not, however, a manner of effecting by machinery what has formerly been done by hand, but embraces a series of improvements in the art of building, which time and experience have shown to be thoroughly practical—that which has hitherto called out a whole neighborhood, and required a vast expenditure of labor, time, noise, lifting, hoisting, and the attendant danger, can, by the adoption of the balloon frame, be done with all the quietness and security of an ordinary day's work. A man and boy can now attain the same results with ease, that twenty men would on an old fashioned frame.

Suppose we compare the heavy, cumbersome barn frame of to-day with the barn of fifty years ago, with its rotten tenons, bulging sides, and broken-backed roof. Can we see one single mark of improvement? Has 50 years advanced the art of building frames? What change is there for the better?

What is demanded, is something in keeping with the progressive spirit of the day. We want really better and stronger frames, and we want them to cost less. If our houses, barns and out-buildings can be built for less money, and be just as good, as convenient, and as safe, it is an improvement that will suit us.

The Balloon Frame answers these requirements. It has long since ceased to be an experiment; and where its principles are understood, no other style of frame is used.

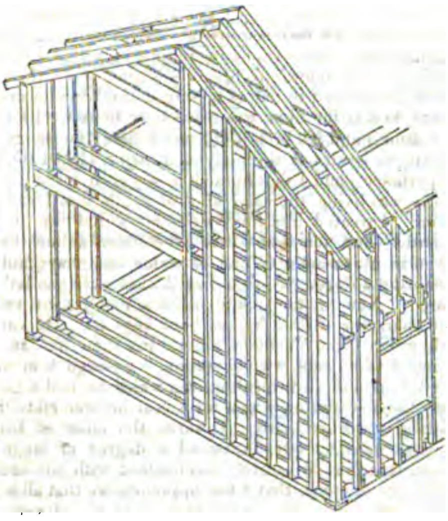

Fig. 1.—Isometrical Perspective View of the Balloon Frame.

The engraving shows a portion of a Balloon Frame, drawn in isometrical perspective. This is sufficient to show the whole manner of construction, the other parts of the building being a repetition. The manner of securing the different timbers is shown in figs. 2 and 3—the nails being driven diagonally, and in a manner to secure the greatest amount of strength.

The sizes of the different pieces of timber in a frame of this size, are sills 3 by 8—corner studs, 4 by 4—other studding, 2 by 4—plate, 1 by 4—side strips, or side girts, 1 by 4—rafters, 8 by 6, or 2¼ by 5 will do—collars, 1 by 4—floor joists, 3 by 8, or may be 2 by 7. Rafters, studding, and joists, are 16 inches between centers.

Small buildings of this character, not calculated for heavy storage, may have all timbers two feet between centers. Small buildings of one story, as tool-houses, granaries, cottages, &c., will be perfectly strong and secure, if all the timbers above the first floor joists are ripped from common 1¼ inch floor plank—thus make studding, ceiling joists, and rafters, 1¼ inches by 5 inches.

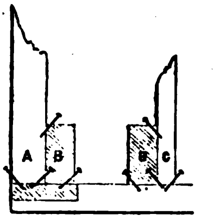

Fig. 2.—Elevation section—manner of nailing—A. corner stud, 4 by 4—B. joist, 5 by 3—C. 2 by 4.

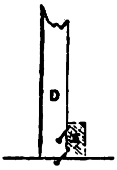

Fig 3.—Upper edge of joist—E. stud.

For large barns, storehouses, &c., larger sizes will be required. The weight and power necessary to injure a building with 3 by 8 studding, with a double row of bridging, is more than is ever practically applied to any storehouse.

The lining of a balloon frame adds immensely to its strength, particularly so if put on diagonally; it may be done outside or inside, though on the whole the inside is preferable. If done outside, it should be carried over the sill and nailed to it; the sill being wider than the studding, in order to get a larger bearing on the masonry, and the floor joists being in the way, does not admit of inside lining being put on in the same manner. Close or continuous lining is not necessary for strength, but for dwelling houses adds much to the warmth. Large buildings, not used as dwelling houses, can be sufficiently well braced by diagonal strips of 1 inch board, 6 inches wide, nailed to the studding inside, 6 feet apart. Where vertical siding is used, these same strips can be put on in the same manner outside the studding. Let the strips run over the sill and nail to it. Between the strips on the sill, nail an inch board, and it is then ready for upright or battened siding. Small out-buildings, barns, &c., do not require any diagonal bracing.

Every stick of timber in a balloon frame not only has a weight to support, but its tensile and compressible strength, which theoretically is 11,800 pounds per square inch of its end area, is taken advantage of. This is not the case with the old style of frame. A balloon frame looks light, and its name was given in derision by those old fogy mechanics who had been brought up to rob a stick of timber of all its strength and durability, by cutting it full of mortices, tenons, and auger holes, and then supposing it to be stronger than a far lighter stick differently applied, and with all its capabilities unimpaired.

The balloon frame has been known in the newer sections of our country for many years; it has been tested and found to stand the test. It is not, nor cannot be patented; there is no money to be made out of it except as a public benefit in which all share alike.

The following are some of the advantages claimed for it:—

1. The whole labor of framing is dispensed with.
2. It is a far cheaper frame to raise.
3. It is stronger and more durable than any other frame.
4. Any stick can be removed and another put in its place without disturbing the strength of those remaining—in fact the whole building can be renewed, stick by stick.
5. It is adapted to every style of building, and better adapted for all irregular forms.
6. It is forty per cent. cheaper than any other known style of frame.
7. It embraces strength, security, comfort, and economy.

Architects, builders, mechanics, and practical men, are respectfully invited to prove the contrary.

Geo. E. Woodward,
Architect and Civil Engineer, 335 Broadway, N. Y.

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☞ Officers Bainbridge Agricultural Society for 1860:—

President—Hon. Joseph Bush.
Vice-President—A. J. Sands.
Secretary and Treasurer—Joseph Juliand, 2d.
Directors—Charles Bixby, Walter Higly, Daniel Bristol, John F Landers, Reuben Searles, Charles P. Kirby.

CALLANAN'S TRENCHER.

☞ The difficulty in the way of accomplishing the Drainage of our farms more perfectly, is of a double kind: the labor required in excavating either for tile or stone is not only expensive, but ordinary farm workmen have not had the experience necessary to do it well. It is a task which they almost uniformly undertake with bad grace, on the one hand, and which on the other is quite as often slighted if let out at contract, except under careful watching; in any event it is a protracted, tedious and costly prelude to the advantages which the farmer is told he is going to secure when once the water is fairly on its way out of the soil.

We have already alluded casually to a new contrivance for facilitating the operation of Draining, which has now been so far perfected that we think we may reasonably hope from it results of considerable importance. Mr. David Callanan, a hard-working and energetic farmer residing about twelve miles from Albany, became a convert to the theory of thorough drainage some years ago, and began in 1853 to carry it into practice. He entered upon the manufacture of tile at that time mainly for the sake of securing what he wanted for his own use; and, from then until now, he has been adding to the extent of the underground channeling of his farm, until he has laid in all something like nine miles of tile beneath its surface.

The obstacles with which he had to contend in performing this labor and in getting it done, were such as to set him to thinking how they might be more advantageously encountered. After numerous experiments, the resulting invention has taken its present form; and we introduce it to the notice of our readers thus prominently, because Mr. C. is not by trade a manufacturer of implements or a speculator in patents, and, having no interest whatever ourselves in his invention—except as it may become a matter of benefit to the public,—we wish to lighten if possible the labors of those who are now engaged in draining, and to do anything we can to put the process within the reach of others who have not as yet begun.

The object of Callanan's Trencher is to loosen the ground so that it can be rapidly shoveled out. As the patent is not yet secured, we defer a complete description until hereafter, but may say that by cutting down at both sides of the ditch, and having also a third cutter in the middle, it detaches the soil to be thrown out, and thoroughly loosens it, to the depth of from 8 to 10 inches at once in the upper soil, and to a proportionately smaller extent at each passage through the harder substances below. We visited Mr. C.'s farm last week for the purpose of seeing its operation in a field which he is now preparing to drain. The sub-soil at a depth of from 10 to 12 inches, was a complete "hard-pan"—perhaps more than a third of it that stones of various sizes, so compactly packed in together no digging could have been done without a pick-axe, and many of the stones so large that it would be a long and arduous task to dislodge and remove them by hand.

The form of the cutters or teeth in this instrument, which are steel pointed, is such as to *keep them constantly in the ground at their work.* When we came to the hardest of the sub-soil, it was a good pull for two teams to scratch out three or four inches even, but it was successfully accomplished; upon coming to a boulder too firmly fixed to be moved at once, the return of the Trencher, striking it on the other side, in no case failed to complete its dislodgment. Several of the stones were split and broken as though a crowbar had been employed, and we watched the process with increasing satisfaction until the ditch was from 30 to 36 inches in depth.

The width and length of the cutters can be adjusted at pleasure, and the whole is so perfectly simple and strong that there seems to be nothing farther to desire in either of these respects. As its weight is some 200 pounds, it would be difficult to lift it out of the ditch for turning, but the horses or oxen themselves do this, while by making the tongues detachable, Mr. C. has contrived an easy way of obviating the trouble of turning the teams when there is the trench between them and a fence close at their heads.

We have not space to speak at present more at length upon the merits of this invention. By promoting the rapidity of the operation it does a great deal; by enabling the farmer to put any laborer at work who can handle a shovel, it does still more, and in the saving of labor and money, as well as of time, it seems to us to justify entirely the anticipations of its inventor. A team or two, according to the soil, can be employed for an hour in the morning in loosening up as much as there are hands to shovel out during the forenoon or during the day, if the horses or oxen are required for other work; or if it is to be done on a large scale, a heavy force of men, with their aid, must be able to go over the ground with wonderful rapidity, as compared with the slow process of hand labor. Mr. C. has also a contrivance for *filling drains*, somewhat similar to a reversed snow plow, which does its work completely, as easily as a plow would turn in one furrow, and which is also of use in leveling the surface of a field, by filling hollows, and scraping off hillocks or elevations.

A part of Mr. Callanan's land rests upon a stiff and compact clay, and we were assured that the Trencher here accomplishes an equal saving, while its work is done still more neatly than among the stones, where we saw it tried. The farm comprises some 200 acres, with a work-shop and forge, where Mr. C. has had a number of machines constructed to supply the orders of those who have seen its operation last autumn and this spring. His address, we may add to save farther inquiries, is Callanan's Corners, Albany Co.

There is much that we should like notice, if our limits permitted, in Mr. C.'s general farm-operations. Although still a young man, he is entitled to rank as one of the most thorough and enterprising farmers in the county.

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FARMER'S CLUBS.

☞ Quietly progressing in numbers and influence, we are inclined to think that Farmers' Clubs are beginning to assume an importance they have never before possessed. In some parts of Massachusetts, and in one or two counties in this State, we might point to several examples of excellent management and remarkable prosperity. Indeed our attention has been particularly attracted to the subject by the receipt of a number of copies of the Greenfield (Mass.) *Courier*, in one of which alone we find interesting and valuable reports of the proceedings of four different clubs—those of Greenfield, Ashfield, Bernardston and Heath. Another contains a report from the Wapping Farmer's Club, and we do not know but there are still others beside these five in that same region.

James S. Grennell, Esq., Secretary of the Greenfield Club, to whom we are indebted for the papers alluded to, has taken a great interest in organizations of the kind, and by lectures before them, as well as letters through the press, has been laboring earnestly to promote the agricultural advancement of his locality. A Farmer's Club, to tell the truth, may often fail—not for lack either of the right materials in ample quantity, or of a spirit of harmonious co-operation, but simply because, like a well made watch lying idle, it is not properly *wound up;* and fortunate is the club which, with intelligence and kindly feeling, includes also among its members some who are willing to be ever on the alert to do this *winding.* It is a task which cannot be accomplished once for all, but requires a frequent exercise of the faculties and tact, that interest may never flag, and some good be constantly developed.

Kindred in some degree to Farmer's Clubs, are associations of another kind, which are also growing up, one by one, over the country. A prospectus before us affords a case in point—that of the "Homer Rural Improvement Association" in Cortland County.* The "Objects of this Society," are indeed worth copying, because it is now just the season of the year when similar bodies may be most effectively organized. They are

> —— "To improve the condition of the village of Homer and its vicinity, and specially
>
> I. To beautify the Public Park, by making and properly sustaining all necessary and convenient walks and carriage-ways.
>
> By planting and protecting shade trees, ornamental shrubbery and flowers.
>
> By making such other improvements from time to time as shall be deemed useful and practicable.
>
> II. To improve and beautify the whole town and vicinity.
>
> By encouraging and aiding where necessary, the planting of shade and ornamental trees along the public streets.
>
> By securing the removal from puplic places and highways, any noxious weeds and other nuisances, that may detract from the beauty of the town.
>
> III. To encourage the introduction into the town, by exchanges and by purchase, of any desirable or rare trees, shrubs, flowers, seeds, fruits, &c.

In addition to the annual meetings, three other stated meetings are provided for:

> 1. A Spring Gala-day on the Saturday preceding the 1st of May, for general tree planting and for such other exercises as the officers may appoint.
> 2. A Summer Festival in June.
> 3. A Fall Floral and Fruit Festival.

The concluding provision is also an important one:

> As tree planting in the Public Park and along the highways, is among the most prominent objects of this Society, it is made the duty of each male member to plant at least one tree or shrub annually, in such places as the officers may direct.

—— Both these subjects have been passed by from week to week under the pressure of other matters, until it is now too late to give to them with advantage the space which at one time we hoped to have done. Spring with its labors is already upon us, and another sowing and reaping will soon have been numbered with those of years gone-by. But we should like to bespeak the assistance of our correspondents another autumn, in discussing the best plans for Farmers' Clubs, and to elicit then from those that have been successful, any experience that is likely to prove advantageous to younger bodies. Who will take a little pains to collect for us during the summer some facts as to the number of such organizations in active operation, their system of proceedings, times of meeting, &c.? We, and we think our readers, too, would be greatly obliged for such information, and it could not fail, toward the close of the active labors of the year, to produce an excellent effect in providing new means of improvement for the quieter mouths. Those who appreciate Farmer's Clubs will please not permit us to forget the cause, five or six months hence, and we shall hope at that time to put them in the way of doing much good unto others.

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PLEURO-PNEUMONIA IN CATTLE.

☞ The recent supposed appearance of a contagious Pleuro-Pneumonia among cattle in Massachusetts, renders any additional light that can be thrown upon the subject at this time particularly acceptable. Even if the disease that appeared was not that which has occasioned so much loss in other countries, or if, being the same, it has already mostly passed away,—it will still be advantageous now to place on record any thing that can be learned from its ravages abroad, in order that we may be prepared to give it a proper reception if it should come among us hereafter.

Col. B. P. Johnson has received through the Russian Consul General at New-York, M. de Natthiek, a quarto volume of over a hundred pages, printed at St. Petersburg in 1854, containing an official report upon the subject, with two colored plates. As this is in German, and extends over ground so wide, we pass it by for the present, but if further examination renders it expedient, shall endeavor at some future period to review the facts and recommendations it offers.

We are also indebted to Col. J. for a copy of the "Journal of the Chemico-Agricultural Society of Ulster," Ireland, for February. From the proceedings at the January meeting of the Council, we learn that Dr. Hodges had received a letter from the county Tyrone, stating that its writer "had never lost an animal by the disease, and that the only medicine he administered was arsenic."

> "He mixed five grains of it with white sugar, and gave a teaspoonful of the mixture every three hours by pouring it down the throat of the animal, and also three quarts of gruel given in the same way twice a day. That treatment he found invariably successful. The first green food the animal was afterwards allowed to get was grass. The writer further added, that in his own locality he had known arsenic to fail, but he apprehended it had been wrongly administered."

Another gentleman present, Dr. Stronge, had "known of three or four grain doses" of arsenic given three or four times a day, "and seen it of the greatest possible use." He thought it in all cases of great importance that the first symptoms of the disease should be detected, and that further investigations should at once be made into its real character.

> "His view was that it was fever that went on for several days, and that upon that fever came pleuro-pneumonia, which was a disease really beyond the power of remedial agents. He believed that when the lungs became involved, the disease was then almost incurable."

The Chairman having suggested that there should be no hay lofts in cattle sheds, with the view of promoting better ventilation, Dr. S. had no doubt that this would operate in some measure as a preventive, but had seen and known the arsenic remedy to act so favorably that until some thing better was discovered this course of treatment was undoubtedly the most rational.

From the remarks that followed we infer that this disease is spreading in Ireland, and that it was carried there originally by importation.

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Western N. N. Ag. and Mech. Association.

☞ A meeting was held at Rochester pursuant to notice, March 15, for the purpose of inaugurating a "Western New-York Agricultural and Mechanical Association." From the report in the next day's papers, we learn that Gen. Jacob Gould of Rochester, was chosen President, and Jacob Hinds, Orleans; C. K. Ward, Genesee; J. E. Patterson, Monroe; Orange Sacket, Livingston; Wm. S. Clark, Ontario, and C. B. Rogers, Wayne, Vice Presidents of the meeting. A number of speakers took part in the discussions that ensued.

> On motion of P. Barry, a committee of five, consisting of the following gentlemen, was appointed to present a plan of organization for an Agricultural, Horticultural and Mechanical Society for Western New-York, and report at the opening of the afternoon session: P. Barry, Monroe; Martin Briggs, Monroe; P. P. Bradish, Genesee; F. R. Pierson, Livingston; E. M. Parsons, Monroe.

The Report of this committee, presented in the afternoon, mentions among the peculiar features which it is desired to present in the new association, the continuance of its shows for a longer period than has heretofore been customary, and "connecting with them a Fair for the sale and exchange of farm stock, implements, machinery, &c." They distinctly repudiate, as several speakers had previously done, "any appearance of antagonism to the State Society." They recommend

> "the plan of a Joint Stock Association, to be designated the Western New-York Agricultural, Horticultural and Mechanical Association, to be located permanently at Rochester, to have a capital of at least $50,000 in shares of $10 each; to obtain a charter from the State; to procure forty to one hundred acres of suitable land for Show Grounds, and erect thereon spacious and convenient buildings for the display of articles in the various departments."

After some speeches pro and con, this report was adopted. From the remarks of D. D. T. Moore, Esq. of the Rural New-Yorker, the design entertained is apparently to merge the present County Society in the new Association. Whether Ontario and other neighboring counties are to imitate Monroe in this respect, is not stated. They are expected, however, to subscribe towards its support. Mr. Burry was careful to point out that no idea of rotation from one point to another in Western New-York could be entertained for a moment. We have no doubt that there are resources enough in that region of country to render the new Society the most flourishing and successful local organization in the State, and it now seems to be in the right hands to call these resources into activity.

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Officers of Greene Co. Ag. Society for 1860:

President—Addison P. Jones.
Vice Presidents—Lewis Sherrill, Burton G. Morss, Elijah P. Bushnell, Prentiss W. Hallenbeck, Lucius Pond.
Treasurer—Danforth R. Olney.
Secretary—Horatio L. Day.
Marshall—George Beach.
Directors—Thomas B. Holcomb, Horace B. Kirtland, John Feeney, Isaac J. Van Allen, Luke Roe, Edward Johnson.

PEACH BORER—Egeria Exitiosa.

Editors Co. Gent.—Every one who has cultivated the peach must be familiar with the mischief done the trees by the larvæ or worm of this beautiful insect. Without going into a long scientific description of the male or female larvæ, the pupa and follicle, which would be interesting only to the entomologist, I shall merely remark that the insect or fly which lays the eggs on the tree might be taken for a wasp. The only difference consists in its not having the divided body, which, in the female of this insect, is of a very dark steel-blue, with a purplish tinge and a yellowish band across the body about two-thirds of the way down, being provided with two blue wings, and two half blue and half transparent. The male is all blue, with transparent wings. They are rarely seen, and when seen are ever in an active and restless state. In eighteen years I have not seen half a dozen; but that is not material—the worm is the principal object of interest, and he may be found on the root of almost any peach-tree, varying in number from one to a dozen or more. Eighteen years ago I planted 2000 of these trees, and having already heard something of this destroyer, thought it must certainly be an easy matter to head him, and without regard to the numerous preventives prescribed by the knowing ones, began with an original experiment, which consisted in binding strong paper about the lower part of the trunks, which, in order to prevent the destructive effects of weather, I painted on the outside with coal-tar, that generally supposed bane of the insect-world. Having treated about 200 of the trees in this manner, I resorted to the old methods with the remainder—putting ashes about some, dosing some with lime, painting some a foot high with coal-tar, and planting others around with that sovereigns't remedy of all—tansey. But it was all in vain; the eggs would be laid and the cruel work go on.

If there was any desirable difference in the vigor of the attack, I fancied it to be in favor of those to which the lime had been applied; though I believe the paper and tar treatment would have proved effectual could it have been preserved, but in most cases it was sufficiently gone by fall to permit the deposit of the eggs; for it must be remembered that this insect lays two distinct crops of eggs, one in June and the other in September, and hence the only certain preventive is one that will be active before and after these months. Now, with all respect for the general belief in the virtues of coal-tar in such cases, I would advise every one to let it alone. I have killed both apple and peach trees with it, and not, as may be supposed, from any poisonous quality in the tar, but simply because being black it becomes such a powerful absorbent of heat as literally to bake that portion of the bark which it covers. If any one would test this, let him place his hand on the side of the tree any time in June or July and he will know why coal-tar kills trees about which it is used. To be sure, the latter-day practice of low-limbing does much to obviate this difficulty, and yet I have long been convinced that the popular idea that powerful and disagreeable odors have any terror for the insect tribe, is a popular error; they either have no olfactories at all, or what they have are exceedingly limited in the capacity of discriminating.

Tar is, doubtless, useful in keeping off rabbits, &c., but it should be mixed with sufficient whitewash to give it a color resembling the bark.

A correspondent of the Scientific American in a late no. recommends coal-tar to be used at the base of plum trees as a preventive of the curculio, but he does not seem to know that that insect has wings. I tried that same plan many years ago, when the opinion prevailed that the curculio was too sluggish to fly, and although it did not kill the trees outright, wherever the sun had access, there the bark was destroyed. Boiling water will kill the peach-worm, but the tree goes with them.

Caustic lime packed around the root, and then watered, has been recently prescribed, but if heat enough is thus generated to cook the worms, you may depend upon losing the tree at the same time.

The remedy that I will now advance may not prove infallible everywhere, but it has succeeded well with me, and has fully convinced me that this plague, as well as others of like nature, can be most successfully overcome by mechanical processes. We know that in the case of the plum, jarring the tree has been decided to be, thus far, the most effectual preventive of the ravages of its great enemy. My plan is to give the peach trees a thorough hand worming in June, then to pack the clay (which in planting was thrown from the bottom of the holes) firmly around the trunk, from six inches to a foot in height, conically, and hoe it away again in October. I had this mounding operation performed about two years ago, (neglecting, however, to remove the clay until last fall,) when in about 1,000 trees we found but three worms! The rationale is this—the insect requires and searches for tender bark on which to lay its eggs, and to find this will remove loose soil at the base of the tree for half an inch and even an inch down. When the base is thus mounded they find nothing but hard bark—another is then tried, when finding things in the same condition, they finally abandon the field altogether. It is but seldom we find worms above ground in the hard bark, although they do sometimes resort to the forks of the main limbs where the bark is tenderer, but one there is soon detected.

Now, as above stated, I do not put this forth as an infallible remedy applicable to all climates, soils, and situations; but it has succeeded in my case, and being both cheap and simple, certainly deserves a trial.

Mt. Carmel O. T. V. Peticolas.

* * *

[For the Country Gentleman and Cultivator.]

SCRATCHES IN HORSES.

I frequently see articles in the agricultural and other papers headed "A Cure for Scratches in Horses," in which a great variety of remedies are recommended. Some of them have the appearance of being based upon scientific principles, while a majority partake more of quackery than common sense. One man calls it a *local* disease, and treats it with a variety of ointments and washes; another says it is *constitutional*, and drenches his horse with all sorts of nostrums. Thus they jog along, no two agreeing in regard to the nature of the disease, its cause, or its treatment. This diversity of opinion has induced me to give *my* experience, that others may be saved the vexatious disappointments which the majority of these "articles" will encourage.

While yet a lad, I had charge during the winters of a portion of my father's horses as my part of "the chores," and the first indication of the scratches would send me delving in the pages of *Mason*, or *Hinds*, or "Every Man his own Doctor," to find a remedy, and when found I as eagerly applied it. What was the result? Well, "to tell the truth," I did not have very good success; for if they healed they would soon appear again, and as might be expected, I was lead to believe it constitutional, and turned to dosing the poor animals with like effect. And thus between eight or ten horses, I was pretty sure of having one or more patients on my hands nearly the whole time. You can imagine my disappointment,—and I abandoned all applications, "threw physic to the dogs," and commenced to keep my *horses'* legs *clean*; since which time I have had no trouble with "the scratches." It is something over twenty years since I have made an application or given a dose of medicine for this disease, and though I have had more or less horses during the whole time, I have had no difficulty in keeping my horses free from this malady, unless I trusted them to other hands to *groom*.

But I have said enough; and now for *my* course of treatment—both preventive and cure. It is simply this: *when grooming the horse, to clean his legs and heals with a common horse brush.* I do not stop brushing when the thickest of the dirt is off, but continue to brush until the hair and skin are *perfectly clean*. This is done every morning, and as I have already said, I am never troubled with their appearance. I now own a horse, which when purchased two years since, was badly troubled in this way, and had been for three years previous to my personal knowledge. With my usual care in cleaning, he was relieved in the course of ten days or two weeks, since which time there has not been the slightest appearance of "the scratches."

Nor would I advise washing the sores with castile soap as is generally recommended, because it *is rarely done as it should be*, and the same end can be attained by brushing, unless ointments have been applied. And unless the soap is perfectly rinsed off, and the legs rubbed until they are perfectly dry, the washing is *positively injurious*. I would say to all, "take the brush and try that, and if it operates in other hands as it has in mine, they will be satisfied with the result."

Some may ask, "What is your theory—the *modus operandi*—of the brushing?" If there are any such, to them I would say, "throw both theory and *modus operandi* to the dogs," and not discard a *fact* because it is not accompanied by a senseless and unintelligible theory, as is too often done.

I intended to have spoken of the too common practice of dosing horses to "keep them healthy," but find my article is already too long, and refrain. NOT A V. S.

We hope the writer will resume this subject, as the proper treatment of horses is one which needs discussion.

CAULIFLOWERS.

The Gardener's Chronicle, London, quotes from a German paper the following description of the method used by the Dutch to obtain their Cauliflowers, which are famous for their size and delicacy:

In the autumn they dig deep some ground that has not been manured; at the beginning of May they sow the large English Cauliflower upon a bed of manure, and cover it with straw mats at night. When the young plants are 3 or 4 inches high, they harrow the ground that had been prepared the autumn before, and with a wooden dibble, 18 inches long, they make holes about 10 inches deep, at proper distances apart, and enlarge them by working the dibble round till the hole at the top is about three inches in diameter. They immediately fill these holes with water, and repeat this three times the same day. In the evening they fill them with sheep's dung, leaving only room enough for the young plant, which they very carefully remove from the bed of manure, and place in the hole with a little earth. Directly afterwards they give them a good watering, and as soon as the sun begins to dry them, water them again. Furthermore, as the plants grow, they dig round them and earth them up in rows. When the head is forming, they pinch off some of the lower leaves of the plant, and use them to cover the young head.

[For the Country Gentleman and Cultivator.]

CLEAN MILKING OF COWS.

One of the most common improprieties of dairy management, and one of the secrets of success in butter making, lies just here. It is well established that the last drawn gill is nearly all cream, and when one of these little measures of milk are left in the udders of several cows, say ten, as is often done, no less than a quart and half a pint of the richest milk is lost every morning and evening, a perfect waste, and more than a waste; for if this were all, the matter would not be so bad as it really is; but leaving milk in a cow's bag has a most deleterious effect upon the cow, causing her gradually to produce a less amount to such a degree in the end, that it becomes clearly manifest in a period of two or three months that there is a rapid falling off, and cows, naturally good, are much injured, to say the least. This neglect is fruitful of garget and other disease, and, if long continued, the cow never recovers her full milking powers. This matter is worth more than a casual thought, and every effort should be made, without being severe upon the animal, as the thing can be accomplished with the utmost ease by a good milker, to milk cows well and perfectly. If the cow is disposed to hold up her milk for any reason, do not leave her side at once, but milk on. To guard against this, it is a very good plan to adopt the practice of feeding with great regularity at the time of milking.

Regularity in feeding is very important. Mr. Stephens, in the Farmer's Guide, relates an instance of serious falling off in the product of a dairy, resulting from a single failure to feed at or near the usual time. If a cow is inclined to kick, examine the udder and see if it is not sore, when she has good reason to do so, and attention should be directed to the case at once; even then she should be milked gently; slowly or fast, as appears best; and, by the way, in ordinary milkings, the faster it is done the better; by all means milk with considerable rapidity on many accounts. If the cow kicks when her udder is not sore, it must be owing to previous rudeness of treatment, and should be overcome by gentleness and persuasion. If the animal is wild, and has lately come into your possession, having become in other hands an inveterate kicker, do not discard her at once. We have known the most desirable cows to be addicted to this habit. She only requires, in addition to the above gentle treatment, which should indeed never forsake the milkman or maid in their management of cattle, under any circumstances—(kindness and attention to his animals being a great resource and a continual reward to the farmer)—that the hind legs be tied to each other as she stands in an easy position—not bound together tight or strained, but separated at the usual distance when untied. Many have been soon cured in this way, who, from being difficult of approach, have become valuable animals, yielding a large quantity of milk, and very docile and quiet. G. P. S.

[For the Country Gentleman and Cultivator.]

TRANSFERRING BEES.

MESSRS. EDITORS—I see in the Co. Gent. of Jan. 5, that some one wishes information in regard to driving bees, or whether it is possible to move them from one hive to another. I will give some of my experience the past season.

In May last I purchased the right to use the Langstroth bee-hive. Shortly after, one of my neighbors, hearing I had got that hive, came to see me, as he had heard and read about them, and also that bees could be moved from the old box hive into them, and to see the experiment tried. He offered to give me a colony of bees in one of the box hives, if I would move them into the Langstroth. So I got my hive ready and started to my neighbor's, with doubts in my own mind as to the result, as I had never seen anything of the kind myself, but the experiment was entirely successful.

Now the way it was done was this. I took the hive containing the bees some five yards from where it stood, and turned it bottom upwards, and placed over it an empty hive of corresponding size, after which I gently drummed the bottom hive with a couple of small sticks, for about fifteen minutes, when I found the bees had all ascended to the top hive. I then set it on a sheet and tied it up. I then cut the combs loose from one side of the hive, and with a saw blade forced off the side of the hive, took out the combs, fitted them into the moveable frames, adjusted them in the hive, and closed it up all but the entrance. I then placed the new hive on the old stand. I took the hive containing the bees, and shook them out on a cloth, and with a large feather swept them gently toward the entrance of the hive. In a very short time they all went in. Since then I have transferred fifteen colonies from old hives in the same way. I have also moved two colonies together, with their combs and stores, from hollow trees—one of them the 19th of the present month.

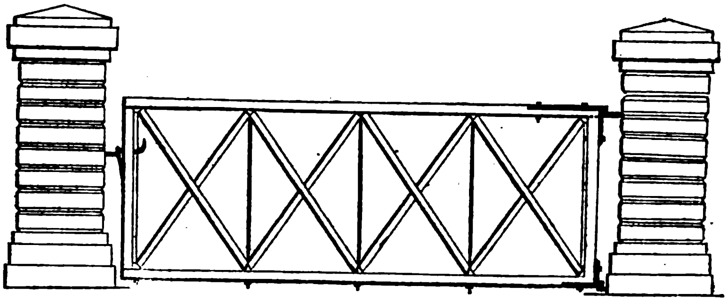
Bucks Co., Pa. H. M. TWINING.

[For the Country Gentleman and Cultivator.]

COTTON SEED MEAL.

EDS. CO. GENT.,—I have been using the above, for cows that gave milk, through the winter and thus far in the spring, viz., one farrow cow and two that are coming in some time in May, which I have before let go dry through the winter, but see no prospect of their being dry as long as I feed three pints of cotton seed meal to each per day. I took six bushels of oats, three of corn, and two of rye—had them ground together, trying that first, three pints each per day, which increased the quantity, but by putting into the feed three pints of cotton seed meal it nearly doubled the quantity, besides adding materially to the quality, six quarts making one pound of good sweet butter. Cows doing better as it regards flesh, than I have ever had them. Begin with a little in bran or any feed you use, as they do not like it at first, but will soon be very fond of it, stirring it in cold water. I intend trying it with calves by scalding it, and have no doubt the effect will be advantageous. I say to brother farmers, try it till higher than $1.75 per cwt. JUDSON WADSWORTH.

West Winsted, Conn.



THE WOODWARD GATE."—For Parks Country Seats, Farms, &c.

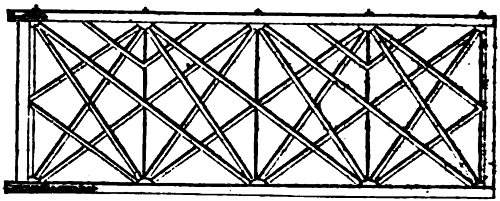
Eds. Country Gentleman—It perhaps never has occurred to the gate-building community, and more especially those who are studying economy, that the well known principle of the Truss affords the best combination of strength, durability, and beauty.

In the application of the Truss to a gate, there is nothing new but the application. It is therefore unnecessary to advocate any of the good qualities claimed for the Truss; they have been so thoroughly proved and adopted in all the best forms of bridges and roofs, as to leave no doubt of its superiority. The enormous tensile strength of iron, being about 60,000 pounds per surface inch of end area, being brought in opposition with the compressible strength of wood, renders a Truss almost as rigid and unyielding as a solid plate of iron.

The figure at the head of this, illustrates the principle. In each panel are two braces of 2 by 4 stuff, halved edgeways into each other, the ends of the braces resting against small triangular blocks, as shown—the iron rods, $\frac{5}{8}$ths to $\frac{3}{4}$th inch in diameter, as may be required, pass through the top and bottom rail, and through the triangular foot blocks; the heads of these rods are countersunk in the top rail, and are not seen in the engraving. Mortices are sometimes made at each corner of the gate, and are the only ones about it. Nails are entirely unnecessary. The braces are all of equal length, and cut square at the end, the bevel being made on the foot block.

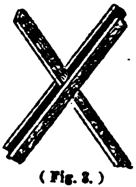
The style of hinge shown in the above figure, is peculiarly adapted to this gate; the rod next to the heel-post secures the hinge, as well as performs its duty in the truss. The other bolts in the hinge are carriage bolts, with nuts, and are every way better than ordinary screws or bolts, the extra cost being but a few cents. When the iron rods are tightly screwed up, each brace is held firmly in its place by compression, and does not need nailing or any other manner of security. The braces might have a small tenon or dowel on each end, or better still, if the triangular foot blocks were made of cast iron, with a small lip raised on each end, they would be necessarily secure. If the timber shrinks or works loose in any manner, it can be brought back to place by turning the nuts. If the braces are all of equal length, and cross each other at their centers, the gate can take no position in a vertical plane, but the one in which it is originally placed—it must always be square at the corners. The only condition in which it can sag, is when a weight is applied sufficient to compress the braces and extend the iron rods. If, however, by the unequal shrinkage of the timbers, or from any cause whatever, the gate should sag, it can be easily remedied by unscrewing the nuts, and placing a thin piece of wood under each brace, running from lower rail towards latch post; in this manner the forward end of the gate can be raised, at any time, as high as may be found desirable. Any brace may be taken out and replaced, and the whole gate rebuilt as fast as the timbers decay.

The work on this style of gate is but little, as most of the stuff is got out with square ends; the cost of the iron rods is about 30 cents each, and the labor saved is a good deal less than their cost; the cost of hinges, such as shown, and the manner of securing them, is less than any other equally as durable. Small horizontal rods, or any ornamental arrangement, can be introduced to make it pig tight.



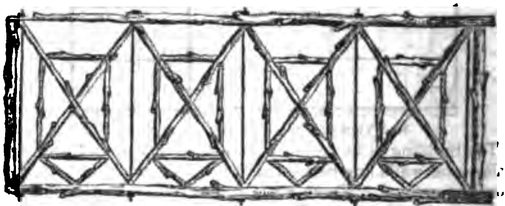
(Fig. 2.).

Fig. 2 shows a gate on the same principle, but double trussed, and with double braces, instead of halving braces into each other. They are used too, one way from lower rail towards latch post, and one between running the opposite way, as shown in fig. 3. These braces are of white pine, 1 inch square, and have proved to be all that is necessary. This gate, fig. 2, was erected for the Rev. C. B. Wyatt, at New-Windsor on the Hudson, in July, 1859. It presents an entirely novel appearance, and unlike any other gate yet erected.



(Fig. 3.)

This principle in gate building is applicable to any kind of gate required, from the plainest farm gate to the magnificent entrance gates of parks or country seats. It is susceptible of innumerable changes in design, and can be made elaborate and ornamental in a high degree.



(Fig. 4.)

Fig. 4 shows a farm gate erected in November, 1859, at "Keewaydin," near Newburgh, N. Y.; braces halved into each other, and without foot blocks. One day's work, though after a person has made one, he can make two in the same time.

Rustic gates, and rustic work generally, except on a small scale, have been failures; but with this application rustic work of any kind can be made immensely strong. For farm gates, &c., nothing is cheaper, more appropriate, and durable.

The principle is not new, but the application is. There is no patent on it. It is merely a hint for those who know how to appreciate a good thing when they see it.

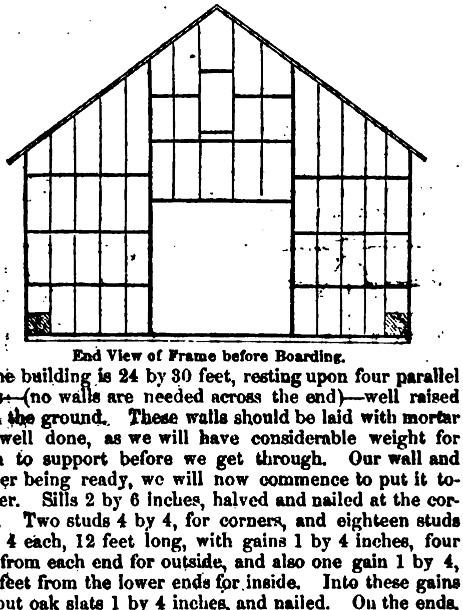
Geo. E. Woodward,
Architect and Civil Engineer, No. 29 Broadway, N. Y.

Western Hog-House and Corn Crib

Eds. Co. Gent.—In the Co. Gent. of Dec. 15 last, we find the principle of Balloon Frames pretty well illustrated by G. E. Woodward of the city of New-York. The cuts and explanations there given, are worthy the careful study of all who ever intend to erect any frame buildings. His descriptions and explanations are so plain that any man who can read figures on a square, saw a stick or board off square at the end, and drive a nail with a hammer, can put up the frame of all his barns, corn cribs, hog-houses, sheds, stables, dairy-houses, and even the frame of his house, without a brace or mortice, no augur or pin being needed. The tools necessary are a square, saw, one paring chisel, hand axe, and hammer, with a plane to plane the door and window casings for his out-buildings, and a leveler to level the sills. This may seem strange to some, but if they will look at the number of the Co. Gent. referred to, they can readily see how studs and joists can be put together, and make very substantial buildings. If I had had the information referred to, previous to the erection of my buildings, I could have saved at least one-third of the expense in the frames. In timbered regions, where small round timber is abundant, it may be well to follow the mortice and tenon practice; but as a general thing most of our buildings are and must be made of sawed lumber, particularly in our great west.

Since receiving Mr. W.'s description of Balloon Frames, I have planned for myself a corn-crib and hog-house, which I send you, with a request that you will suggest such alterations for the better as will be suitable to your long experience.

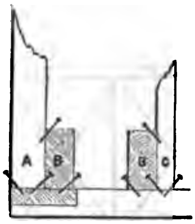
There are no improvements more needed in the west than the proper storage of our large corn crop, and I can but revert to the too shameful waste in feeding it out. I suggest the following plan, hoping that it will be carefully criticised and reported upon by others. I am no mechanic, having never built a building of any kind, but have a desire to see less waste and more profit among our western farmers. The usual question is, how much do we *raise?* It should be rather, how much do we *save?*



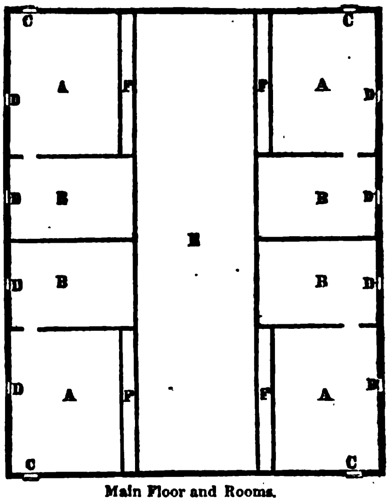
End View of Frame before Boarding.

The building is 24 by 30 feet, resting upon four parallel walls—(no walls are needed across the end)—well raised from the ground. These walls should be laid with mortar and well done, as we will have considerable weight for them to support before we get through. Our wall and timber being ready, we will now commence to put it together. Sills 2 by 6 inches, halved and nailed at the corners. Two studs 4 by 4, for corners, and eighteen studs 2 by 4 each, 12 feet long, with gains 1 by 4 inches, four feet from each end for outside, and also one gain 1 by 4, five feet from the lower ends for inside. Into these gains are put oak slats 1 by 4 inches, and nailed. On the ends, for upper part, nail on a board 1 by 4 inches. Make another to match. We now have the two outside bents. Raise plumb and stay lath. The two inside rows of studs or bents, made of studs 3 by 4 inches, and same distance apart of the outside rows. The outside or end ones, must be 4 by 4; to these the doors are hung. Gains are cut 1 by 4, five feet from the lower ends, into which are placed oak slats to correspond with the outside slat. These studs are of sufficient length to reach and unite with the rafters. The end studding, 2 by 4, are now put up. The corners and door-posts 4 by 4, as already described, with slats as represented in the end view.

The floor joists are 2 by 6, placed edgewise by the side of the studs, and spiked to the sills and studs. Nails driven as represented in annexed figure.



The upper tier of joists are eight feet long and 2 by 9 inches, and rest on edge on the inside oak slats, nailed and spiked to the slats and studs. The rafters, 1¼ by 5 inches, rest upon the narrow plate directly over each stud, and also spiked to the inside row of studs, which reach the rafters in the center. Rafters projecting from plate 18 inches. Our frame is now complete. Board vertically with planed boards, and batten.



Main Floor and Rooms.

A. Feeding Rooms, 8 by 10 feet—B. Sleeping Rooms, 5 by 8 feet—C. Entrance door for hogs—d. Blind windows—E. Driveway, 30 by 10 ft, —F. Feeding Troughs.

For each feeding-pen and sleeping-room, put in a heavy blind, hung on hinges, to allow ventilation when opened or shut. Through this place the manure is removed from the pens. Lower floor made of two inch plank. Troughs and spouts of oak stuff. Other lumber can be all of pine.

For ceiling on the outside row of studs around the pens and partitions, use inch boards, ceiling on each side of driveway 2½ feet high. Doors 8 feet square, or double, fastened in the center of each. One large glass window in each gable. The four pens will hold each from 6 to 8 common sized fatting hogs. The space over hog-rooms, will hold, if 8 feet wide and 8 feet high and 30 long, 625 bushels of corn in the ear on each side of the driveway. If more corn is on hand and wants a shelter, nail a few narrow boards to the center and outside studs, just below the plates—ceil up with any culls of boards, and put up the corn even against the rafters. Then if there is more corn still, take joists 2 by 9 inches, and put them over the driveway, eight feet from the floor; lay on some loose boards, drive in the load and throw it up. Put in the joists as you proceed, and a few of the last loads can be put up while the team is out of the back door and the wagon inside. Fill up, even to the very ridge.

By this time we have a building 24 by 30 feet, 30 fatting hogs, and about 2,000 bushels of corn. When you wish to prepare corn for market, the corn-sheller is placed in the alley, the corn shelled and sacked. Two men, with a good machine, will sack from 100 to 150 bushels per day. The alley can also be used to put in many farming tools, or even will make a good and convenient place for the carriages, sleighs, &c. After the hogs are butchered there will be room in the hog-rooms more than the store hogs will need. There will be a fine place to shelter and feed calves.

The amount of lumber, all in board measure, will be about 7,000 feet. Entire cost of materials, paint, &c., about $140. As there are many a western farmer who fattens over thirty hogs, if he builds after this plan all he has to do is to add in length to suit his convenience.

Rock Island Co., Ill C. G. TAYLOR.

TREATMENT OF SPAVIN.

I have a horse that has a bone spavin. Is there any cure for it that you are aware of? I am advised by some to let it alone—by others to fire it, and do not know what course I better take. L.

Confirmed spavin is probably never radically cured. Firing and blistering are the old remedies, and sometimes produce apparent relief, but they are now discarded by careful practitioners. Dr. Dadd recommends rest during the inflammatory stage, and the application of cooling lotions to the parts. He uses a mixture of 4 ounces of muriatic acid, and six ounces of tincture of bloodroot, in two quarts of water, and apply this daily by means of a sponge. Or, another remedy, equally good, is a mixture of 4 ounces of very strong vinegar, 2 ounces of proof spirit, and 3 ounces of common salt, dissolved in a quart of water. The following is his mode of application:

Take a piece of sponge, slightly concave, corresponding as near as possible to the form and size of the hock; by means of a few stitches, affix two pieces of tape or linen, so as to form an X; each piece must be long enough to encircle the joint two or three times; after dipping the sponge in the mixture, it must be applied to the inside of the hock, and there secured, and afterwards kept constantly moist. By a faithful application of the above the inflammatory symptoms (which are not confined to the joint alone, but prevail in the surrounding tissues) will soon subside, and anchylosis progresses in a slow, yet favorable manner, without the usual pain and irritation

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[For the Country Gentleman and Cultivator.]

CULTURE AND VALUE OF MILLET.

Eds. Co. Gent.—As there seems to be a great diversity of opinion regarding Hungarian grass, I cannot refrain from giving my testimony in its favor. Last spring I came in possession of a farm which had been rented a number of years, and I assure you it had fared not one whit better than other rented farms, and had not one acre of good meadow in the 100 of cleared land. There was one piece which was called meadow, but it was so overgrown with bull rushes, flags, and other coarse herbage, that I thought it of little value in its then state, and had it plowed up. Wishing to do a dairy business, I cast around me to see what I could plant or sow to take the place of hay for winter food. After much inquiry I concluded to sow Hungarian grass and millet. As I had an extra amount o, labor to perform to get my land in some kind of shapef did not get the Hungarian grass sown until the third week in June. A portion of it was sown on a heavy clay sod; this did not yield over one and a half tons per acre. A portion on an old field, which had been planted to corn and potatoes, and sowed to oats and rye continually for 18 years, ever since the farm was first put under cultivation, without the first particle of manure; this yielded about one ton per acre. The balance was sown on land which had been cropped two years only, and the year previous had been planted to corn and potatoes. This being in good heart and condition, gave us from 2¼ up to 4 tons per acre. In one corner of a field planted with market vegetables, there was 30 rods which was too wet for use until late in June. This had been plowed the year before, but being so wet was allowed to lie fallow. We plowed this when we plowed the balance of the lot, and on the 22d of June plowed again, and sowed with four quarts of Hungarian grass seed. On the first of September we cut and drew into our barn from this 30 rods one and a half tons of dry hay.

The result of our experiment is as follows: From 15 acres of Hungarian grass and 3 acres of common millet, we have fed 27 cows, 1 bull, 2 oxen, and 3 horses, from December 1st until this 6th day of March, and still have enough left to carry them until the middle of April. Our stock have had all the hay they would eat. I have no desire to have any person believe that I would try to winter a parcel of milch cows without a good supply of roots. Our stock will have consumed something over 3,000 bushels of turnips, mangolds and parsnips by the first of May, and are now in much better condition than when we commenced feeding them in the fall.

I am so well satisfied with my last year's experience with Hungarian grass, that I shall sow from 50 to 60 acres this spring, a portion of which I shall cut for soiling during the summer, and hope to feed 50 cows from the balance next winter. I have no doubt that with land in good heart and tillage, we can get from three to five tons per acre of most excellent fodder. Both cows and horses eat it with great avidity. Certainly our horses never looked better or were capable of doing more hard work than this winter, neither will they eat as much grain as when fed on the best English hay. Both horses and cows eat it much closer than any other hay; at least such has been my experience. I am satisfied that it will yield a greater amount of fodder than any other of our cultivated forage plants at the same cost, and that it will ripen if sown as late as July 10th, at least sufficiently for good Hay. The seed should not be covered over half an inch, and it should be cut for fodder while green, but after the seed is well formed.

Detroit, Mich. C. Wood Davis.

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[For the Country Gentleman and Cultivator.]

FEEDING COTTON SEED MEAL.

S. A. P., in the No. of the Co. Gent. for March 15th, asks for experience in feeding cotton seed meal. He shall have mine.

Winter before last I had no corn to feed to my cattle, and I procured from St. Louis a ton of the cotton seed oil meal. I commenced feeding to my cattle about a pint at a feed. This I increased until they received by the second week about a quart at a feed.

The cattle, consisting of three yoke of work cattle, one bull, two cows and a calf weaned, improved wonderfully. They became fat and sleek. The cows increased the yield of milk in two weeks to double the quantity given before the oil meal was fed. They came out in the spring in tip-top order. As an adjuvant in feeding, or in place of corn, or with it in moderate quantity, I consider it an invaluable feed. To those who wish to fatten cattle during winter, I can recommend the use of cotton seed oil meal.

Prairie Cottage, Ill. H. Hinkley.

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[For the Country Gentleman and Cultivator.]

SHEEP—COARSE WOOL vs. FINE.

At a recent meeting of one of the Farmer's Clubs in Maine, during a discussion of some questions connected with sheep husbandry, Mr. R. A. Davis made some interesting and important statements in regard to the cost of keeping and comparative value of the fine and coarse wooled breed of sheep. In the course of his remarks he gave the substance of a conversation with an intelligent farmer in an adjoining town, who kept a flock of 20 of the native breed of coarse wooled sheep. They weighed on an average 100 lbs. per head, and required 8 lbs. of hay each day. The average clip of wool per head was 3 lbs., which sold for 38 cents a lb., making $22.80. From the 20 sheep, sixteen lambs were sold at $2 per head, amounting to $32, making in all a total of $54.80. Mr. Davis then gave some account of his own flock. He had 42 Spanish merino sheep, the wool of which averaged 4¼ lbs. per head. This was sold for 42 cents per lb., amounting to $74.97. Of his flock 27 were ewes, from which he raised 25 lambs. These were not sold, but he estimated their value at $2 per head, making $50, which added to the wool makes a total of $124.97. In keeping his sheep Mr. Davis had weighed their hay, and found them to consume an average of 2¼ lbs. per day; and by following out this figuring, he had demonstrated that 26¼ fine wooled sheep could be kept for the same that it would cost to keep 20 of the coarse wooled; thus making a difference in a year in cost of keeping, lambs, and advanced price of wool of the pretty sum of $40! This Mr. Davis considered quite an item. S. L. B.

PLAN OF GROUNDS.

A western correspondent furnishes the accompanying plan of a residence and its surrounding grounds, (fig. 1,) which, on being laid out and planted, are found too stiff to prove satisfactory, and requests a better plan. The country around the house is rolling prairie. The house is situated on an eminence commanding a view of the town a mile distant, towards *a*. The scenery is quite similar in all directions. The trees shown in this plan are mostly newly planted and may be removed.

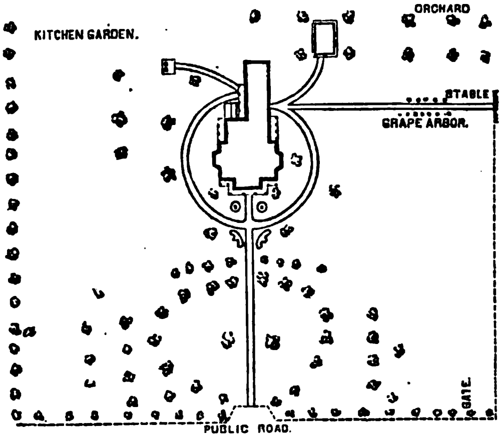

Fig. 1.

In designing a plan, there are many circumstances to be taken into consideration, all more or less modifying the result. The undulations of the surface must be known in order to fix properly the position of the roads and walks. As we do not possess this information, the position in which we have placed them must be merely suggestive. The amount of labor to be expended in keeping the grounds in order, is another important consideration. If broad spreading trees only are to occupy the lawn, and the grass is to be kept short by sheep, the expense will not be a hundredth part of the amount required to mow the lawn weekly, so as to keep it like velvet, to dress off the walks with mathematical precision, and to keep trees, shrubs, and brilliant flower beds in the turf, in the highest state of culture and finish. We do not suppose that any one asking us for information on this subject, would adopt the slovenly mode of allowing the grass to grow up for hay, to be cut but once a year, on a space like this of but two or three acres. We infer that our correspondent intends to adopt the middle course—to plant only the more thrifty growing trees, and hardy and vigorous shrubs near the dwelling, and to keep the grass mowed frequently—say once a week in early summer, and once in two or three weeks later in the season.

Fig. 2, exhibits the plan we propose as an improvement. We have made it as simple as practicable—laying down but a single carriage road, and a few short walks. A more elaborate plan, and of more costly execution, would have included various walks over the lawn, now intended to be merely traversed in the short grass. Most of the walks in immediate proximity to the house, are such as utility demands, and they are skirted with the smaller shrubbery; or, if desired, with circular or oval flower beds. But the latter must be kept in the neatest trim, and occupied with continued bloomers, or they will appear worse than none. We omit the grape arbor on the road to the stable, as being unsuited at that place, where the vines could not be properly cultivated for successful growth.

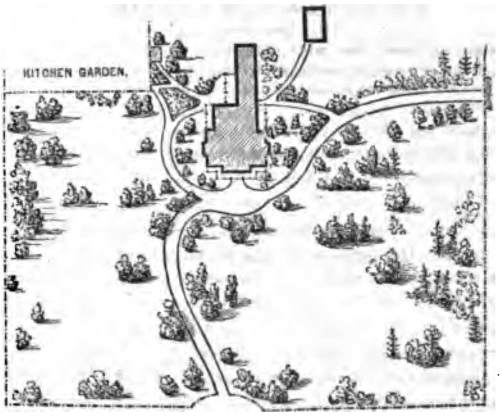

Fig. 2.

In a minute working plan, the position of every tree and its kind, would be given. This reduced figure precludes such minuteness of detail—the engraving will show the style of planting; selecting the trees, and adjusting their position will afford an endless exercise of taste and skill. Some hints will be found on this subject in the Register for 1860, p. 250, 251, &c. The mode of transferring the plan from paper to the ground is given on p. 245 of the same work.

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[For the Country Gentleman and Cultivator.]

FARM ACCOUNTS.

The importance of farm accounts is well insisted on in The Cultivator, and it is hoped that those who have the matter in hand will prepare a system which will be so simple and convenient, as to commend itself to all young farmers. It must be simple, and it is entirely unnecessary that it should be anything else. One would suppose it a very easy thing to keep the debt and credit of a farm, and show the balance at the end of the year; and so it is; but many fail, as we see, from not understanding the subject, and some from attempting too much—getting the accounts mixed, which should be kept entirely separated.

The object of farm accounts is to find the income and expenses of the farm, and they are not, therefore, to be confounded with the expenses of the family or with any other expenses or income. A good householder will keep an account of his family expenses, but will not have them confounded with other expenses.

Is there any difficulty in keeping a record through the year of all the expenses of the farm and of all the income from it? The income is all that is sold from the farm or consumed by the family. The expenses are for labor, repairs, seed and manure bought, taxes, &c. In regard to most of these, there would be no difficulty in keeping and footing the account. In regard to some items, the young farmer might have some doubt where to put them in the account. If he has, for instance, expended something upon his buildings, he might question whether that should go into the expense columns, as repairs, or whether it is a permanent improvement, making his farm so much more valuable permanently. If it is only so much as to keep up the general repairs of the buildings, the money expended in it may be carried to "repairs" or "wear and tare," as some say. But if he makes an addition to his buildings, or sets a young orchard, or drains a part of his farm, the money he expends in it should be put down in the column of expenses, and the cost of it, in money and labor, should be set in the column of "income," as worth so much to him permanently. He has got it yet, only he has taken out of one pocket and put it into the other. If he should buy a fine carriage for his family to ride in, he will not charge that among the expenses of the farm. It has nothing to do with the income or expenses of the farm. Neither has any other item of family expenses, their food, clothing, education, traveling expenses, or benevolent gifts. The board of the farm hands, whether in the farmer's family or in their own family, should be charged among expenses, the same as labor. Also the value of the labor of the farmer's sons. His own salary is the nett proceeds of the farm, above the interest upon his capital used.

Some advise to keep debt and credit with each crop, and each animal or lot of animals. This is very well, and helps form an estimate of the profits of different crops, &c.; but we cannot foot up the profits of the year by that method.

Some charge the farm at the beginning of the year with all the stock and implements of the farm, and at the end of the year give credit for the stock and tools, the difference showing the increase or decrease. This is right; but I prefer as more simple, to set down only the difference in the inventory at the end of the year, compared with the beginning, in the column of expenses if there be a decrease in the valuation, and in the income column if there be an increase in the valuation.

If the farmer would show all that the farm is worth to him, he will add to the nett proceeds the rent of his house, the value of the prepared fuel taken from the farm, and the value of those conveniences of riding about and traveling which his horses afford, and which do not belong to the business of the farm.

It ought to be presumed also, that a good farmer will add something to the value of his farm every year by a course of general improvement.

I had supposed that there was no need of any published system to aid young men, in a matter so simple, but in some efforts to point out a method to an inquirer, I am led to wish for some plain manual, which may give examples to those who wish to study the subject.

My own practice is this, which may not be the best, though I have followed it with entire satisfaction, ever since I began to take the Cultivator, which was with the first number.

I keep a book, in which I enter every receipt and every payment through the year, whatever it may be, with date and circumstances sufficiently particular to make it clearly understood. This book is of itself a valuable record. If I have a considerable account with any one, as with a hired man, I keep a separate account of debt and credit with him, and carry the footing only into my first named book. At the end of the year, I have only to carry to its respective column each item of income or expense, whether it be of the farm, or the family, or any other. I have then, ready to be footed, the income of the farm, the expenses of the farm, the expenses of the family, and any miscellaneous income or expense which may have accrued. This summing up at the end of the year requires but a few hours of time, and but little skill in book-keeping. And the information thus put into tabular form will be so valuable to any young farmer, that he will be very unwilling to relinquish this practice, after the experience of a year or two.

Every young farmer should keep also a book for memoranda of various things connected with the farm, the date of the different operations, experiments which he has made, especially his mistakes, notes on the seasons, the arrival of birds, the time of flowering of certain plants, &c., &c. It will be of great value and pleasure to him hereafter. I hope these hints may lead some to make a trial of farm book-keeping. N. Reed. *Amenia Union.*

P. S. I ought to have said in my communication on "Farm Accounts," that the "end of the year" is to be considered the last of March, and not as some literally reckon, the last of December. The farmer's year must begin on the first of April, and he can scarcely close his accounts to any other point.

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What good would centuries do the man who only knows how to waste his time?

Transplanting, Pruning and Watering Trees.

Messrs. Eds.—I propose planting an orchard of young apple trees this spring, and as one principal cause of failure in transplanting, is the excessive evaporation of moisture from the branches and trunk, which waste the mutilated roots are not able to supply, a severe shortening-in of the head is recommended. In connection with pruning, would it not be a good way to check evaporation, by *bandaging the trunk with straw* at time of planting?

I have also apple trees planted last spring, which I am compelled to bandage every fall, to prevent their being girdled by rabbits. Would it be an injury to these trees to leave the straw sheathing on during the summer? Also, give me your system of planting dwarf pears.

Lebanon, Pa. Geo. W. Kline.

Many newly set trees perish by the large evaporation through the bark before the leaves expand. This is the only way that moisture escapes from them during this period; and as there is but little circulation, and the roots are torn and feeble, there is but little moisture absorbed through the roots. Watering at the roots is consequently of little use at this time—indeed, the roots are sometimes soaked and rotted by too much watering before circulation equalizes its distribution. Hence, it is important to wet the bark of the stem and branches, which may perhaps be most conveniently done by a thin and light sheathing of straw kept properly moist. The same end has been efficiently accomplished by merely washing the bark several times a day, without the aid of any covering. Trees, badly wilted, and affording little promise of living, have thus been induced to grow finely, when no other treatment could have restored them.

After the leaves are expanded, everything is changed. The leaves throw off moisture rapidly, the circulation is rapid, sap flows in at the roots, passes up the wood of stem and branches into the leaves, elaborated juices are sent down through the bark, and new wood and new roots are rapidly formed. There should now be plenty of moisture at the roots, to supply this rapid consumption; yet it is rarely advisable to apply water. A well worked mellow soil will furnish it best. If water is poured in at the foot of the stem, there is too much of it; and settling the earth and causing it to harden and bake, there is too little of it in a short time. This constant succession of flooding and drouth is extremely unfavorable. If water must be applied, take off the top soil, pour in the water, and then cover up again with well pulverized earth. But the best of all means for its supply is, to provide a broad deep bed of mellow soil, in which the tree stands—this will furnish regularly at all times, just what is wanted and no more; and holding it like a sponge will contain a large quantity—many pailfuls within the reach of the roots of a young tree—without soaking or flooding the soil.

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[For the Country Gentleman and Cultivator.]

HAY CAPS.

Few of our farmers are aware that the very best hay caps can be made from the common seamless bags made by the Lewiston Bag Co. and the Stark Mills, and others. By slitting one side and the end, and hemming the raw edges, you get a hay cap 42 by 40 inches, of a thicker and stronger fabric than you can purchase in any other form. The bags are retailed at 25 cents each, and need not be cut up until used as bags, and have begun to give out at the corners.

I think the fabric the very best that is made, for the purpose, and have often wondered that the manufacturers did not make a heavy single cloth for the same purpose.

Brookline, Mass. a.

HORTICULTURAL NOTES.

Protecting Trees from Mice and Rabbits.

Some time ago I noticed in THE CULTIVATOR, a plan for protecting fruit trees from mice and rabbits, by simply tying a newspaper round the bark, so as to cover it about eighteen inches from the ground. This I have tried for three years, and none so secured have been injured, while others were destroyed. The paper is, however, liable to get wet and become torn, and it is necessary to heap up some fresh earth around the tree, or the mice may get below it. Last year a farmer suggested to me an improvement, to make boxes about 18 inches high of different sizes, for large or small trees open at top and bottom, and one side off, until they are placed around the bark, when that side is either screwed or nailed on. I had a number made, and placed round the most valuable trees. They appeared to be a complete and effectual security, not a tree being injured. They were about an inch under ground, or a little earth thrown up around them. This spring I took them off and laid them up for next winter, just as good as when first put on. The only possible way a tree thus secured could be injured would be either by a mouse getting under the box, (but this they will not do if some fresh earth is thrown around it,) or a rabbit standing on his hind legs and reaching the bark above the box, but if eighteen inches is not sufficient, they could be made two feet in height. The cost is very trifling, when they will answer for a number of years; I found it easier to tack on the side board with a few small nails, than to take the time to screw them on.

The Yellows in Peach Trees.

Mr. ADAMS, an intelligent and observant farmer of Cumberland Co., Pa., stated to me that he had a number of peach trees on his farm affected by the yellows; that one day, while one in his employ was plowing, he took up a considerable portion of the root of one of the diseased trees, and was surprised to notice the root some distance under the ground presenting a white silvery appearance, which on careful examination proved to be minute white worms. He then took up roots of other peach trees in the same locality, affected with the yellows, and found the roots some distance from the trunk, exhibiting the same aspect.

So limited an instance would not warrant any conclusion that these worms were the cause of the disease called the yellows; indeed it would be hardly possible that such should be the case, and not have been discovered in the many orchards which have perished in this way. It is more likely that these worms infested the roots in *this locality*, and had no connection with the disease which destroyed the trees; but the fact is worth noting, as it can be easily tested, where trees are thus diseased, by digging up the roots for some extent, at different seasons of the year.

The Borer in the Hickory.

The same gentleman says he has noticed a winged insect about four times the size of the common wasp, possessing a powerful sting, perforate the hickory trees, and deposit in such excavation its eggs; and that when the wood decays, the young come forth by thousands; by these perforations the tree ultimately dies. The remedy is to examine the trees, and wherever they appear, to cut down the tree and destroy the nest, just as we would do the caterpillar, so as to prevent their spreading; if neglected, the damage to a body of hickory trees will be very serious to the land owner.

This insect cannot be the same with the apple borer.* Mr. A will send you specimens if requested.

The Curculio.

The curculio is very averse to the smell of burning soot. The same gentleman says he has preserved his plums by burning soot under the trees at the time this insect commences his ravages. We hope that some of your readers will make the trial and give the result. H.

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*Thomas says of the apple borer—"The perfect insect is a brown and white striped beetle, about half an inch long, which flies at night. It deposits its eggs late in spring or the first of summer, in the bark near the surface of the ground, and sometimes in the forks of the branches. The first indication of its presence is the appearance of numerous small round holes, as if the bark had been perforated by buckshot. These holes will soon become more visible by the ejected dust." Page 129.

THE AUSTRALIAN BEE.

I think the Australian bees would suit your correspondent C. P., as they are without a sting. I am sorry I cannot give you the natural history of the insect, as, during my stay in Australia, I was more a collector of insects than an entomologist. However, I remember they were a small black insect, about the size of a small house fly, and when at rest their wings lapped one over the other, and void of all sting; but though small in stature, they were legion in numbers, and collected vast quantities of the purest honey. It would appear like a traveller's tale were I to tell the vast amount of honey I have seen taken from a swarm of these bees in a huge gum tree, (Eucalyptus.) A friend of mine hived a swarm of them in a common hive, from which he got a second. He said they did well, and offered me one to take to England. Since then they have been received in that country, but of the results there I am unable to say.

I should think they would do well in the southern States, but of course the north would be altogether too cold for them I should also think that the climate of England would be too humid for them.

To me, like your correspondent, the sting of a bee is poison, and it would certainly be a great consideration could we naturalize a stingless sort. E. H. COLLINS.

Onondaga Co.

Recipe for Cottage Pudding.

MESSRS. EDS.—As I consider the recipes contained in your paper worth the price of subscription alone, I will, as time permits, add a little to them and other matters occasionally; and as I am considerable of an epicure, I will commence with a recipe for a cottage pudding, which every person having a cow may have with little labor, and but very little expense, and which but few who use it (especially in hot weather,) would be willing to do without.

Take 3 quarts of milk to 1 quart of flour—one-half of the milk to be put on the fire and brought nearly to boil—then the other half of the milk with the flour, the flour well blended in it—stir into the pot on a slow fire, and keep it boiling for one hour; or until it is as thick as good paste, when you must add a small teaspoon of ginger and salt, and pour into shallow dishes to cool; when it will cut like good jelly, serve up cool with warm milk in winter, or cool in summer.

P. S.—You can make enough at one time to do any size family five or six days, if kept in a cool place, and if you wish to make it as good and more wholesome than any other pudding, add a little vanilla or other syrup while warm, and serve with a spread of strawberries, peaches or jellies, or any of the fruit butter and cream. Try it, mothers, daughters and servants, and my word for it, you will away with sage, corn and other puddings, but be careful to stir it all the time, or you will scorch it, and then it is done for. J. B. C.

Diamond Plaza, Pa.

COAL TAR FOR PAINTING.

EDITORS CULT. AND CO. GENT.—I notice in your paper, an inquiry from a subscriber, what is the cheapest and most durable paint for old buildings? Having had some experience in such matters, I would say coal tar is the cheapest, the most durable, and the best looking paint for old buildings, in the market—especially if painted white around the doors and windows, the barge boards and corners of the building, with white lead. It gives the building quite a tasty appearance, and at less than half the cost than if painted with any kind of oil paint.

As to the cost I will give you my experience, as I have two barns, one 38 by 40 feet, the other 26 by 44 feet, wagon house 26 by 51 feet, with several other small buildings, such as hog-house, wood-house, smoke-house, &c. I used two barrels of coal tar in giving them two coats, which they should always have to give them a handsome, glossy appearance. The tar needs no preparation, but use it just as it comes in the barrel, cold, putting it on with a large round brush. I also used about 50 pounds white lead and 3 gallons oil. The white lead should always be painted first before the tar. The labor of putting on was ten days, at $1.25 per day.

RECAPITULATION.

2 barrels tar, at $3.50 per barrel,	$7 00
50 lbs. white lead, at 8 cents per lb.,	4 00
3 gallons oil, at 70 cents,	2 10
10 days labor, at $1,25 per day,	12 50
Total,	$25 60

Making $25.60, which is certainly cheap enough, and which will last and look good for twenty years. JAMES OPIE.

Farmers Should Teach Each Other.

☞ WHAT FARMERS WANT is a question much discussed, and people try to answer it in all sorts of ways—some with this prescription and some with that—one with Science, a second with Colleges, a third with Governmental aid, a fourth with Societies, and it may be a fifth with Agricultural Papers. Two lines which we have chanced to find in a late number of the London Agricultural Gazette, are worth many long treatises upon this subject, because they point to precisely the end which all these prescriptions should have in view, and without which none of them is good for much.

In speaking of the recent appointment of a new editor of the Royal Agricultural Society's Journal, it is remarked that he can only "succeed in the discharge of his duties in proportion, not as he brings the maxims of French, of German, of Italian, or of Roman Agriculture to bear upon his readers,—not as he uses any influence from without to modify the practice of the English farmer, *but just as he shall succeed in inducing and enabling English agriculturists to teach other.*"

TO INDUCE AND ENABLE AMERICAN FARMERS TO TEACH EACH OTHER—would be the best motto that our Agricultural Science could assume. To *induce*, because unless practical experience leads the way, she cannot follow to systematize and to explain—to *enable*, because every forward step she really makes, is a forward step for practice. The two cannot be divorced, and neither admits of deception and unsoundness in its fellow—but, hand-in-hand, each countenacing and promoting the efforts of the other, they may together find the path of true success. And we have still, in a great measure, to anticipate such concordant effort in this country; we have heretofore been mostly importing the fruits of foreign investigations, and are only by degrees entering upon them for ourselves. Dr. FITCH, in Entomological Science, for instance, has in this State made a right beginning, and we have long thought that if the State, in connection with our Agricultural Society, could be induced to extend similar encouragement to other branches of agricultural science, at least to chemistry—great good might be gradually effected.

And so we might go on to show, that whatever we hope of actual use to our agriculture, either from institutions of Education, from Governmental aid, from our Societies and their Fairs, or from agricultural Reading, can only be accomplished just in that proportion in which the farmers themselves are induced and enabled to teach each other. With this end in view they secure at once a broad foundation for their labors; without it, we may have large and even well filled halls of learning, in which the farmer has no share; grants of land, that go mostly to politicians; socities that sacrifice every design of good with which they were founded, to some outside object or private interest; agricultural books got up to sell, and "agricultural" journals of interesting miscellany.

We might bring the same lesson down to individuals. Every farmer who sets a good example is doing something to teach those around him. But he may very largely extend the sphere of his influence, and, "in giving, gain," if he will more actively contribute to induce and enable his neighbors to obtain similar means of improvement—for example by supporting in harmony and with some measure of public spirit, local or general societies and clubs, by extending the circulation of agricultural journals, and by giving through them the fruits of his and their experience.

To revert once more, to the article from which we have taken a text, because it struck us that it might be made suggestive of thought—all the well known English writers on Agriculture appear to feel slighted, not only in person, but in class, by the sudden elevation to the leadership among them of a man never heard of before by the farmers of the country. The new editor of the Royal Ag. Society's Journal appears to have been appointed entirely upon "red tape" grounds—as having had family influence in his behalf to outweigh the merits of all the other candidates, of whom Mr. MORTON, of the Ag. Gazette and editor of the Cyclopedia that bears his name, was one of the most eminent. The fortunate appointee, a Mr. FRERE, was only with some difficulty carried against the opposition of such men as HUDSON, the Castle-Acre farmer, and his compeers, and the selection seems to have met with criticism so general and apparently so well deserved, that we should imagine it difficult for him long to retain the position, unless the desire of a rather unusually comfortable salary outweighs motives of delicacy, or leads to unusual exertion to give satisfaction and "conquer success."

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[For the Country Gentleman and Cultivator.]

GAIN IN FEEDING CATTLE.

NEAR GENEVA, April 7th, 1862.

MESSRS. TUCKERS—I have sold and weighed to-day, a few fat cattle, and will give you the weights when put up last Dec. 3d, and their gain since. It may give some of the young farmers, who are frequently making inquiries about feeding, some idea what they may expect from buying good cattle; but I confess that the gain this year and last, is greater than is generally got.

Two steers weighed together Dec. 3,......	2,785 lbs.—gain 435.
Two do. do. Dec. 3,................	3,060 lbs.—gain 565.
Two do. do. do.	2,680 lbs.—gain 260.
One extra fat cow, Dec. 3.	1,380 lbs.—gain 115.

These cattle were weighed 3d Dec., with *full bellies;* now they had *neither food nor water for* 14 *hours* before weighing. If they had been weighed when full, it would have made the gain 45 to 50 lbs. more on each animal. The cow was very prime beef when put up; consequently she gained little.

The Hon. A. B. D. will see that what I argued at Albany is proved by practice—that the larger the cattle the more they gain on the same amount of meal, as the above cattle were all fed an equal quantity of meal; I expect Mr. D. will say that the large ones would eat most hay. Perhaps that may be the case, as it was not measured out to each beast like the meal; but I don't think they do. I weighed 15 cattle to-day, and found the largest always gained most.

I have a fat pure blood Hereford heifer, being the first I ever fed of that breed. She is so fat the drovers say they would not risk taking her to Albany along with other cattle; they say that there is such a mass of fat on her that the other cattle would bruise her so as to ruin her sale. If all the Herefords feed like her, our friend SOTHAM never said half enough in their favor; but they cannot be all like her, else there would be no other cattle kept for fatting purposes. I have also a grade Hereford steer, which will be three years old the 23d of this month. I have no doubt he weighs over 1,800 lbs.—will weigh him on his birth-day. If he goes much over 1,800 lbs. it will be made public.

JOHN JOHNSTON.

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[For the Country Gentleman and Cultivator.]

FEEDING CUT HAY TO HOGS.

MESSRS. EDITORS—On the 24th of last Sept. I bought two pigs, four weeks old. They were kept on skim-milk until about the 1st of Jan., when the quantity of milk falling short, I commenced feeding cut hay—clover and timothy—and have continued to do so until the present time (April 9th.) I never wintered hogs so easy and cheap. They have grown finely, and are thrifty handsome fellows.

The mode of feeding is this:—In the morning, after feeding, about four quarts of hay, cut fine, is put into the pail, together with a pint of barley-meal, then boiling water sufficient to wet and scald it, when well stirred up. After standing a while, the pail is filled with milk and dish-water—this is fed to them at noon, at which time the same dish is prepared for them at night, and then another for the morning. Scalding the hay in this way, makes it tender and sweet, and is readily eaten.

I think this a very economical way of wintering hogs. At any rate, I never had them do better than on this feed.

Jefferson Co., N. Y. J. L. R.

Inquiries and Answers.

Draining Wet Land.—I have a piece of land on my farm, that is wet, and holds water until late in spring; it is a side hill, clay subsoil. Will it do to underdrain it? What will the tile cost to drain about five acres; and do you think it will pay? Our lands are generally a black limestone land, as it is called. R. *Franklin, Tenn.* [It will not only "do" to drain it, but it will not do to let it remain undrained. Very probably it will increase its value at least ten-fold. Two inch pipe tile, which will be large enough for eighty rods in length, or an equivalent, under ordinary circumstances, (see *Register* for 1859, article *Draining*,) may generally be had at the manufactories for about ten dollars per thousand—they are 12 or 14 inches long. Our correspondent may quickly figure how many will be required for an acre, with drains two rods apart; and also the cost of transportation from the nearest manufactory, each piece weighing two pounds or so. From these data he may easily determine the cost per acre. No doubt it will "*pay*" well; ultimately, if not immediately.]

Clover and Plaster.—I have a field of some twelve acres, which I wish to manure previous to laying down to pasture. It is too far away to haul out manure, and I intend sowing clover and plaster this spring and plow down, seeding with grass next spring. What I wish to inquire is, the amount of red clover and quantity of plaster I should apply per acre—when the best time for sowing each and right stage to turn under? **Harry.** *Sunbury Co, N. B.* [Clover seed should be sown very early in spring—or it may be a little later, if lightly and evenly brushed in. Or, if sown on newly plowed and evenly harrowed land, it may be covered by means of a roller, which presses the seed in and crumbles the surface. This mode does well, if performed quite early, and is followed by rain. Brushing in is best for late sowing. There should be at least one peck of seed per acre. There will be a good growth by the end of summer, when it may be plowed in, but it would be more profitable to wait another year, when the roots will be larger and the crop heavier. It should be plowed in just as the blossoms are disappearing, and before the stalks become dry. Plaster should be sown early in spring, at the rate of one or two bushels per acre.]

Sherwood's Grain Binder.—I noticed, some time since, in a daily paper, an article headed "Joy to Farmers," in which it was stated that an apparatus had been invented, and successfully operated, as an attachment to the reaper, for binding the grain into sheaves. Can you inform me if such an invention has been produced; and whether one can be had the present season? **A Farmer.** [A machine for binding grain, attached to any common reaping machine, has been invented by **Allen Sherwood**, of Auburn, N. Y., to whom application may be made for information. We have witnessed its successful performance in the harvest field, an account of which will be found in the 14th volume of the Country Gentleman, p. 121; and a figure and description were given in the 13th volume, p. 330.]

Pilfering of Chickens—Best Cultivators.—Can you or some of your numerous readers, give a mode to prevent the chickens from plucking up the corn, as I wish to plant a field in corn near the barn. To shut them up would be quite a task. I have seen a number of plans given, but do not know if they can be relied on. Also who manufactures the best horse-hoe to work corn with, and the price. **Levi Hawk.** [We know of no chicken remedy for the purpose proposed. The best cultivator *teeth* which we have ever used are those made by **Sayre & Remington**, of Utica—they are steel—are light, strong, efficient, and are sharp till worn out. The best cultivator in *form* is that constructed by **Milton Alden**, of Auburn, N. Y. It has thills which give the workmen a surprising control of its depth and accurate working. Both these we think are furnished for about eight dollars each. We figured the latter in our last volume.]

Willow Culture.—Will you or some of your correspondents please inform me through **The Cultivator**, of the plan to pursue in order to successfully grow the Osier willow? R. B. C. [For an article on this subject, see Cultivator for Jan. 1858, p. 22.]

Manure Cellars.—Will some of your correspondents who are soiling, explain how they construct their manure cellars, so as to answer their primary purpose of saving manure, and the secondary one of fattening swine? How do the porkers get in and out of the receptacle? When soiling a dozen cows in as many stalls, under a shed, with the stall doors opening to the south, into the barnyard, (the front of the shed forming part of the north boundary of the yard) where ought the manure cellar to be? W. J.

Lice on Poultry.—Could any of the readers of the Co. Gent., or its publishers, tell us how to destroy the lice on fowls effectually? If so, you would do me a great favor by publishing it in your next. J. K. [Apply sweet oil to the top of their heads, under their wings, and elsewhere. Another remedy is to mix, say half a pound of sulphur, with several quarts of feed, and allow them occasionally to eat it. Indian meal would probably be best. We should prefer the oil remedy—which might perhaps be modified by substituting lard. But the best of all remedies is *prevention*—effected by thorough cleanliness—whitewashing the hen-house, and keeping every part constantly clean.]

Estimating Hay in Bulk.—What number of tons of hay will the bay or mow, as we call it, hold, when well settled, dimensions as follows—17 by 32 feet, 16 feet posts, and 1¼ pitch to the roof? A. W. [The rule given by different writers, to estimate hay in tons by the bulk, varies greatly. We have seen in an agricultural paper claiming reliability, the statement that 700 to 800 cubic feet are required for a ton of common hay, which is obviously beyond all bounds. The bulk varies with the kind of grass, time of cutting, degree of curing, and depth of the bay; nevertheless, we think the following rule a fair average: For clover hay packed solid, about 325 to 350 cubic feet; good timothy about 275 cubic feet, but under a very heavy pressure, one-fourth less. This rule should vary considerably with circumstances. The bay mentioned by our correspondent would contain over ten thousand cubic feet, and would therefore hold from thirty to forty tons, well packed away and carefully stuffed full.]

Varieties of the Red Clover.—We have three varieties of clover seed for sale here, termed the "large or Herkimer county," the "medium," and the "small" clover. I wish to know whether the "Peavine" clover, advertised in the Co. Gent., is the same thing as the "large or Herkimer Co.," commonly so called. How would the Peavine answer for soiling, say to follow the medium? Would it make a good succession? If I am rightly informed, it ripens later—if so, would it not be in its prime after the other has gone by? One thing more. Is Lucerne adapted to this climate, and would it be valuable for soiling purposes? Where can the seed be obtained—at what price, and how much would it require to the acre? J. L. R. [The clover, like other plants continually reproduced from seed, runs largely into varieties; and it would be difficult therefore to pronounce on the identity of any local sorts without comparing the same in growth. There is no doubt that any of the larger sorts would do well for soiling—those which run largely to stalk would generally mature later than the dwarf kinds. Many high recommendations have been given of Lucerne, and many experiments made with it—but that they are generally unsuccessful is shown by the fact that its cultivation has not been extensively adopted or permanently carried on. The seed may probably be had of J. M. **Thorburn** of New-York, but we do not know the price.]

☞ S., *Medway, Mass.*, should subscribe for the **Country Gentleman**, where he will find the subject about which he inquires, more fully discussed than the limits of **The Cultivator** will allow of our doing in its pages.

Tile-Draining.—Do any of the tile manufacturers in your city, ditch and lay the tile? Can you tell me the cost per acre, the drains to be 33 feet apart? There is not a rod of tile-drains in this town, and no factory for making tile in the vicinity. All the tile laid in Worcester are brought from Albany. C. W. G. [There are no tile manufacturers that cut ditches and lay tile for others. The cost of tile-draining per acre, the drains 2 rods apart, and 3 feet deep, the ditches being cut by hand, will vary with circumstances, but may be set down about as follows, as an average:

Digging 80 rods of ditch, 30c. per rod,	$24
Tile, about 1130, 14 inches by 2 inches in diameter,	12
Laying tile and plowing in the earth,	3
Total,	$39

One-half the cost of digging the ditches will be saved, if a drain plow is used, reducing the cost from $39 to $27; and when the soil is favorable, and tile only $10, as in some places, the cost would be still less. If brought many miles by railroad, the expense would be increased.]

What Ails my Fowls?—When first taken, they act as if trying to swallow—then whirl around like a shaker dancing—others keel over, like a gymnast—and at last become stone-blind, seeming to lose all command of the head. They will eat heartily, though it is with great difficulty they pick up their food, the head flying off first one side, then the other. C. W. G. [This disease may be the *vertigo*—caused perhaps by overfeeding or improper food. We never had any experience in its cure—but Bement says that holding the head for a moment under a stream of water, arrests the disease, and caster oil removes the tendency.]

Varnish.—I wish you would be so kind as to give me a receipt for varnish, through The Cultivator. A Subscriber. [Varnish is usually made by dissolving gum copal in turpentine, with the addition of some drying oil. But we are unable to give the exact process or proportions, as it is so much easier and cheaper to buy the varnish ready made, which is usually kept by all dealers in paints and oils, and by most druggists.]

Grapes Mixing by Close Proximity.—Being about to put out a number of grapevines, with the view ultimately of training them to an arbor, I wish to make the following inquiry. The vines will be placed about ten feet apart on each side of the trellis or arbor, of different varieties of fruit, viz., Delaware, Diana, Rebecca, and Anna. Now, being placed in such close proximity, whether there is not a probability of their hybridizing so as to change the character of the fruit? T. [There is no danger of the fruit mixing or being changed as suggested. Each flower will probably fertilize itself, but if it does not, and its neighbor performs the office, it will not affect the *berries*, but only the *seed* they contain.]

Horses and Hogs.—Is it injurious to horses to have hogs kept underneath their stable to work over their manure? J. B. [Horses, to be healthy, must have pure, fresh air—and if the fumes of the manure are allowed to come up from below and load the air and taint the food, the result cannot be beneficial. A perfectly tight floor will exclude the vapor.]

Salt for Wheat.—I wish to try an experiment with sowing salt on wheat this spring—how much should I sow per acre? John Jones. *Golconda, Ill.* [Sow from five to ten bushels—it is usually applied in autumn about sowing time, or soon after—but is said to have done well if applied early in spring.]

Salting Cattle.—W. B. inquires respecting salt for cattle. I would say to him that for a number of years I have summered from 100 to 300 head of cattle, and I salt them twice a week, all that they will eat, and I have never had one hurt by eating too much. I have found, in buying fat cattle that had not been well salted, that they never weighed, according to their appearance, as well as those that had been well salted. In the spring of the year, I find an advantage in mixing ashes with their salt after they are put on grass. It is a help towards shedding the old coat and starting them to thrive.

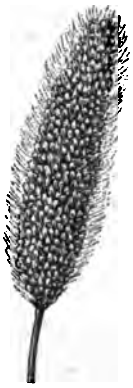
Ohio Farm, Ill. J. W.

Feed for Horses and Cows.—Can feed for five horses and two cows be raised on nine or ten acres fair ground—(I have no manure to start with, and the ground is an old pasture pretty well run out)—and what rotation would you advise for that object? W. A. M'C. *Pittsburg, Pa.* [Some horses and some cows will eat nearly double the feed of others, and hence all general estimates can be only approximative. We understand our correspondent to ask if *food* for the whole year can be grown on the ten acres, to be applied wholly to feeding them. A horse will require at least three tons of hay to carry him through winter, and he should have 30 to 40 bushels of grain. A cow will need about two thirds as much hay as a horse. Consequently the five horses will require at least 15 tons of hay—possibly 20 tons—and the cows 4 tons—say 22 tons in all. At 2 tons per acre, (a good crop) eleven acres of meadow would be needed. Corn sown in thick drills, (at the rate of 3 bushels per acre,) will yield nearly three times as much fodder per acre, and may be fed exclusively to cows and partly to horses—which would bring the required land for the winter fodder within the ten acres—leaving a portion for raising the grain.

If our correspondent merely intends to support the animals exclusive of the winter season, the estimate would stand about as follows: Pasturage for five horses, if good, eight acres; for two cows, two acres—to which should be added two acres of corn fodder, &c., for soiling in autumn, and during any severe drouth which might occur in the latter part of summer. If the old pasture, "pretty well run out," could be plowed up and re-seeded *heavily*, (twice as much seed as usual, or more,) it would doubtless greatly increase the amount of pasturage.]

Manure for Fruit Trees.—Will you inform me, through the medium of your valuable paper, what is the best fertilizer that can be placed around the roots of fruit trees at this season of the year. Also, what is considered the best wash for the bark of apple-trees to prevent the ascent of worms and promote the health of the tree. L. O. T. *Tariffville, Conn.* [As a general application for all localities, stable manure and composts made from it, are most valuable and reliable. Autumn is the best time for application, but much benefit results from spring manuring, if properly speded in. Rotted manure, or compost which has been made of equal parts of manure and turf, or manure and muck, and a small portion of leached or unleached ashes, say a twentieth part more or less, is a good fertilizer. We trust our correspondent will avoid the common error of applying manure in a small circle at the foot of the trees, instead of spreading it as far as the roots extend, which is generally as far on *each* side as the height of the tree. Soap suds, or ashes and water, make a good wash for the bark, but we know of no wash to prevent insects from crawling up the stems.]

Millet.—Would you or some of your correspondents describe the difference between the common millet, *Setaria italica*, and Hungarian grass? My reason for asking for information is, that many of the farmers around here say there is no difference. I received a package of seeds collected in Japan by one of the officers in the expedition with Commodore Perry, in which was a small parcel of the common millet. During the progress of its growth, I noticed one head five or six times the size of the others. In place of a single spike this was compound. I directly suppressed the small to secure this one. I have one head before me now, eight inches long, and many of the side spikes one inch long; the foliage is large, fully half an inch diameter. Should it prove different from the Hungarian, I will increase it, and make it known. The horses and neat cattle are very fond of it. Mr. John Merryman, President of the Agricultural Society of Maryland, exhibited it at Chicago last fall, and a certificate of merit was awarded for it. Sam. Feast. *Cockeysville, Md.* [What we call "common millet," because most commonly cultivated, and generally known as millet, or German millet, is the *Setaria germanica*, not *italica*—and is the same as that sent out by the Patent Office under the name of *Moha de Hungrie*, and the same as the famous *Hungarian Grass* of Iowa. The annexed figure was drawn from a head of Hungarian Grass received by us from Iowa, and is undoubtedly the true German millet. The Italian millet, *Setaria italica*, differs from the above, in having a thicker stalk, and longer but much less compact spikes, being composed of several roundish clustered spikes. From our correspondent's description, we think it not unlikely that the single plant to which he refers may be the true Italian millet.]



[For the Cultivator and Country Gentleman.]

L. Tucker & Son—In renewing my subscription for "The Cultivator," from its origin, under the lamented Judge Buel, a quarter of a century ago—continuously to the present time—I take pleasure in bearing my testimony to its long continued usefulness, and the interest with which I receive each successive number by due course of mail, every one of which contains something both interesting and useful, and some especially so. Indeed, I have long considered it the *best* monthly agricultural periodical of our country. Though of course, where there are so many contributors, some of the articles bear evidence of theoretical enthusiasts, while on the other extreme, some of a rather fixed adherence to early and erroneous conceived opinions. But there are other writers, who aid much in "disseminating useful knowledge among men." There are men of science, of learning, of *practical experience*, and of clear and sound discriminating mind and judgment, of which latter—many are included, who have not been blest in their early days with as liberal an education as so many of the rising generation can avail themselves of—some communications from them are often among the most *practical* and *useful*, and I would *encourage* them, more especially as it is a greater *effort* for them to pen an article for the public eye, than from men of science and literature.

I have often felt strongly impelled to expose some of the fallacies of some writers, believing they often do much harm, but do not like to appear in that light—yet it certainly ought to be done by some one or more—while those that merit it, ought so to be set forth and sustained.

W. N.

[For the Cultivator and Country Gentleman.]

Clod Crushers, Book Farming, &c.

Eds. Cult. and Co. Gent.—"Do good and communicate," you say, and I say that if any one expects to, they must make a beginning. I will give a little evidence of the value of taking agricultural papers, which I began to take and read 18 years ago, and have not been without one or more since. I do not think it spoils the value of any information to go through the agricultural printing press as some do, although they would practice the same if it was told them by their neighbors. I often have got information from one number of your paper, and others, which was of more value than the cost of the paper for years. I will give you an instance of it.

The Clod Crusher which you gave a description of in 1858, and also the evidence of another person as to the value of it, in 1859. I drew on the meadow last spring a quantity of scrapings from the yard, which was mostly dirt, and could not be spread so but there was a great many lumps, both great and small; and remembering the articles above named I looked them up, (having kept all my back vols, and not used them for kindling wood as I have known some to do,) and went to work and made a crusher. I went to work with it, and the way it crushed and spread the lumps (doing more and better work in one hour, than three or four men could do in a day,) would convince those most set against book farming, that there is a profit in taking the papers; (and by the way some of them think they will have one made this year.) Mine had to do a great deal of work last year at home and at the neighbors, fitting land for grain and roots, and covering grass seeds. I think it is equal to its recommends by your former correspondents, although mine was not made after your pattern exactly. Not having any plank of the right shape, I made it out of common 2 inch plank, and if it was larger, it did its work well, and answered for a stone boat to draw off the stone from the land at the same time.

Now if I could induce one or more to try it by calling their attention to it again, I should think I had done some good by trying to communicate. Would it not be well for you to give a description of it again?

The ink which this is written with, is also an evidence of the value of taking these papers, it being made from the receipt in the Feb. Cultivator, page 51, a quart costing only three cents. Book Farmer.

Vernon, N. Y.

Agreeably to the suggestion above, we reprint the description of the clod crusher alluded to. It was furnished for our papers by Mr. D. McCullock, of Loudon Co., Va.

Materials.—One scantling 3 by 4, and 12 feet long, to be sawed into three pieces—7 planks 5 feet long, and 7 inches wide, two inches thick on one edge, and the other edge half an inch thick; (sawyers can saw them by raising one edge of the log,) and one plank 1½ inches thick, and 12 inches wide.

How to Make it.—Lay down the pieces of scantling 2½ feet apart; lay on one plank, thick edge to the end, take an inch auger and bore through the plank and scantling; countersink the holes through the plank with a chisel, so that the pins will not draw through; then take the next plank and lap it one inch over the thin edge of the other, and put the pins through so that they will catch both planks; when the last plank is on, slope off the scantling like a sledge runner; then put on the wide plank, turn over, wedge pins, bore a slanting hole in each piece about a foot from the front, to pull by. Put a chain of suitable length on the pins; hook your swingle trees to the middle; driver to stand on the hind end. If not heavy enough, put on stone. It does not answer well on stony land, because the stones don't break. If the land is wanted very fine, and once over is not enough, harrow up the clods, and go over again. Farmers living on clay loams will find this tool of great advantage. We use it after the harrow, and it saves one harrowing. It has several advantages over the roller—costs less, turns easier, pulverizes better, and levels.

COOKED FEED FOR HOGS.

Eds. Cultivator and Co. Gent.—I will give you my experience in feeding cooked feed to hogs.

I weighed five shoats—their gross weight was 566 lbs. Fed 150 lbs. wheat bran, cooked, in eight days—weight 628 lbs.—gain, 62 lbs.

Fed 280 lbs., or four bushels poor frost-bit corn, cooked, in eight days—weight, 646 lbs.—gain, 18 lbs.

Fed 245 lbs., or 3½ bushels secondq uality corn, cooked, in eight days—weight, 698 lbs.—gain, 52 lbs.

If I calculate right, the bran, cooked, at four cents per pound for the gain on the hogs, paid 33 cents per bushel of 20 lbs. The frost-bit corn paid 18 cents per bushel—that was as much as could be expected of such corn. Two of them were boars that I altered while feeding this corn; they gained nothing. The second quality corn paid 59½ cents per bushel. This corn would not have brought more than 30 cents per bushel in market.

Hogs at four cents per pound are below the market price here, but I calculated them at four cents to make the same figures.

Mr. Proctor's good corn, as reported in your paper some time since, paid three cents per bushel for the trouble of feeding; my second-quality corn paid 29½ cents per bushel for the trouble of cooking and feeding, and on the same quality of corn he fed, it would have paid 10 cents per bushel more. His gain is about the average of feeding on dry corn. J. Widney. *Ohio Farm, Ill.*

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[For the Country Gentleman and Cultivator.]

Films on the Eyes of Cattle.

Messrs. Editors—I have seen inquiries about films on the eyes of cattle. I have never had a trial on cattle, but have cured or taken off films twice or three times from the eye of a young mare, by applying new milk from the cow two or three times a day for three or four days. Take a little in the mouth, and it is easily deposited in the eye. It is mild, easily tried, and not expensive. W. P.

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[For the Country Gentleman and Cultivator.]

Ice Cream and Cake.

For "Jennie,"—and if she does not think it "excellent," she will differ from many others who do.

One quart good sweet cream—2 quarts new milk—2 teaspoons arrow-root mixed with two of good butter—1½ pounds white sugar, and the yolks of 5 eggs well beaten up.

Boil the milk, and stir in the mixture of arrow-root and butter, and as soon as that boils, set it off, and stir in the sugar and eggs, and let it cool. Then stir the cream in, and flavor with a little manilla, lemon, or what else best suits the taste, and then freeze.

The whites of eggs not used in the ice cream, will help to make a very nice cake to eat with it, called "Silver" or "Lady" cake. Half a pound sugar, 6 ounces flour, three ounces butter, whites of 5 or 7 eggs, well beaten, and flavored with extract of bitter almond. Lucy.

Burlington Co., N. J.

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[For the Country Gentleman and Cultivator.]

CHEAP PAINT.

Messrs. Editors—Noticing an inquiry for a cheap paint to put on old buildings, in answer I would say I have had some experience in that line, and will give the desired information.

In the first place take some fine oil meal, mix it with cold water; then put it on the stove, and keep stirring till it boils. Then reduce it to the desired thickness with warm water. If you wish it white, stir in whiting, or any color you like. Apply with a brush, the same as paint. It fills the pores in the wood, so that after two coats it will cost no more to paint an old building than it would a new one. It penetrates the wood, and does not peel off like whitewash. It is never safe to paint over whitewash. It will last a number of years, as the oily nature of the meal keeps it from washing. A. B.

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Damp Beds.—Mr. H. E. Stanley, of Stourport, Scotland, recently died at that place, from the effects of sleeping over night at Ross in a bed with damp clothes. Medical aid was speedily called but proved of no avail.

[For the Country Gentleman and Cultivator.]

Death of a Distinguished Agriculturist.

On the 11th of April Mr. B. V. French, of Harrison Square, Dorchester, Mass., departed this life at the ripe age of 69. His funeral took place on the 12th, at Dr. Starr's church in Braintree, where Mr. F. formerly resided, and was attended by a very large concourse of people.

Mr. Benjamin Vinton French was born in Braintree, July 29th, 1791—learned the business of a grocer—began trade in 1812, and followed it 25 years. As early as 1818 he began to interest himself in farming, and soon after became a landholder—enlarging his farm in 1824, and in 1836 gave up his business in Boston, after having acquired a good property by dilligence and assudity in his calling.

To prevent *ennui*, on quitting the busy marts of city activity, his friends advised him to furnish himself with a fishing tackle and a sporting gun, which he did, but found no occasion to use them for the purpose anticipated, for he found his rural employment ample for this.

His farm comprised about 200 acres, mostly under cultivation. It consisted of a great variety of soils, from the gravelly to the mucky. He inclosed his grounds with stone walls—the materials being taken from his fields—often trenching deeply before building the wall. His moist grounds were drained and made cultivable and productive.

He collected the meanwhile, the largest and most valuable Agricultural Library in the State—to which he added the best current Agricultural and Horticultural journals, both domestic and foreign. He was a constant reader of his books, magazines and papers—thus seeking to unite practice with science.

As a Pomologist, his judgment and skill were generally acknowledged. He had at one time over 400 varieties of the apple in cultivation, with as many pears—with large varieties of plums, cherries, and of the smaller fruits. This was done to test the varieties, for the purpose of determining the best for economical purposes or uses in cultivation.

He built a very costly barn—one which has been described in the Gentleman and Cultivator. Though it was deemed "a model barn" by many, yet it was too expensive for common farmers to imitate.

Mr. French was one of the founders of the Massachusetts Horticultural Society, the National Pomological Society, the United States Agricultural Society, the Norfolk Co. Agricultural Society, the Mass. Board of Agriculture, of which he was a member until a short time before his death; and by his influence an act was past by the Legislature in 1856, for the establishing of a Massachusetts School of Agriculture.

A short time before his death, the estate of Mr. French was found involved in irrevocable debt, and was sold at a terrible sacrifice, really not less than relatively. After his homestead and effects were sold, Mr. F. removed from Braintree to the place where he resided at the time of his death—and soon after opened a Farm Agency office, in North Market street, Boston, where he held constant and congenial intercourse with farmers in matters relating to rural economy—buying and selling stock, &c. He disposed of a part of his library to the State Board of Agriculture, a part to a gentleman in Boston, and retained a part down to the time of his demise. He was often heard to regret that he sold his books—such as had been his constant companions and silent counsellors for many years.

The death of such a man is a great public loss—leaving void a place that cannot be easily filled. He was a man of highly cultivated taste, of great enterprise and energy of character—an advocate of progress, and promoter of improvement in everything that concerned the welfare of society—remarkably genial and entertaining in conversation—always abounding in good humor—full of anecdote, and ever ready to communicate valuable information on a wide range of subjects. But Mr. French's work is done, and well done, in testimony of which, the Massachusetts Horticultural Society has decided to erect a suitable monument over his grave in Braintree. Columella.

CORN CULTURE IN KENTUCKY.

Eds. Co. Gent.—I would have written an article upon the cultivation of Indian Corn, some time since, but I felt it was like taking coals to New-Castle. A Hoosier correspondent, in your issue of March 29th, tells how they cultivate corn in his State; but makes his account so indefinite as to be of very little use to one needing instruction. I think, therefore, that the *precise* mode of cultivation, of some good practical farmer, would be much more to the purpose. As I have been at the business a good while, and have tried a good many plans, I will give an account of my practice last season, by which I produced six thousand bushels shelled corn on less than one hundred acres.

The land was all spring-plowed—which was done as deep as my teams could possibly draw the plows. Did not plow an acre of ground when too wet. Let patience have its perfect work in this particular. Harrowed when the ground was in proper order, with heavy two-horse diamond harrows, twenty-four teeth. Laid off both ways, three feet and a half, with one-horse diamond plow, as deep as horse could pull. Planted white flint corn, small cob; covered with hoe; plenty of dirt. Best field planted 10th of May.

Did not work my corn until it was stout enough to bear close severe plowing. Implement used was the one-horse diamond plow—narrow and deep, made to order—run the bar and split the middle. This is done twice in immediate succession, before leaving each field; then drop the plow and thin. (My land bears three stocks.) Then treat the next field in like manner until you get round the whole crop. By the time this is done, the first field is able to bear the mould-board. Throw two furrows, deep and strong—as deep as the horse can pull, and as close as the plow can get, and split the middle. Do this once, and proceed to No. 2, and so on. When you get through all, repeat this immediately. This will make four plowings, which is about all that we can do with 100 acres or more.

Our wheat harvest comes in here from the 20th June to 1st July, and our corn is rarely ever large enough to lay by at that time. The crop is almost always greatly benefitted by plowing thoroughly after harvest. Do not abandon the plowing on account of drouth. Plow—plow—plow, in dry weather—fear not.

As to other implements for cultivating corn, I have eight of the five hoe cultivators; and as to shovel plows, showers of them. These are all very good, but the heaviest crops I ever made, to wit—7,500 bushels and 6,000 bushels—were made without them.

Boon County, Ky. A Ky. Farmer.

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COMPOSTING ANIMAL MATTER.

Editors Corntry Gentleman—Having noticed an inquiry in the Country Gentleman in respect to animals for manure, I will give you my practice. I have been in the habit of killing from 40 to 50 calves a year at four days old. I make a pen 12 feet square; then cover the bottom four inches deep with swamp muck; then place on the carcass of a calf, and cover it with one load of muck, and so on until they are all in—one two-horse wagon load of muck to each calf. If I lose a cow or any other animal in the course of the year, it is put into the heap, with the same proportion of swamp muck. When it has laid one year, I apply it to the land. According to my experiments, it is worth twice its bulk of stable manure. In 1856 I applied 25 two-horse wagon loads of stable manure to the acre on an old meadow, and plowed it in. Then I plowed a piece on one side of it without any manure, on which I applied about half as much of the animal compost to the acre as I had of the stable manure; then harrowed it all, and planted to corn; the next spring sowed it to oats and seeded it to timothy and clover. There has been quite a perceptible difference in each crop in favor of the compost. I could see a difference in color and in growth of each crop, for more than fifty rods from the field, for three years past. I did not harvest it separately to know the exact difference—the land and treatment all the same.

West Pawlet Vt. S. D.

THE CULTIVATOR.

ALBANY, N. Y., MARCH, 1860.

☞ We have given in another part of this paper some account of the feeding operations of Mr. Jurian Winne. Since our visit at his place, he has sold 100 of the sheep, and we find the following paragraph in the last market reports of the *N. Y. Times:*

> At O'Brien's also, in Sixth-street, there were a few sheep on hand, of 1,434 received during the past week. Some of them were of prime quality, especially 100 State Leicester sheep fed by Jurian Winne, a few miles out of Albany. Mr. Winne has well earned the reputation of being one of the best feeders in the State, of which some stock yet to come to market will be conclusive evidence. The 100 alluded to were sold by McGraw & O'Brien, as follows: 3 to W. Lalor, $51; 20 to B. Lawrence, at 7½c. per lb., live weight, or $235.73; 55 to M. Tabin, $643.62; and 22, scattering, for $264, making a total of $1,194.34, or an average of $11.94 each. The 20 sold to B. Lawrence weighed 157 lbs. each.

☞ "How to Cultivate and Preserve Celery," by Mr. **Theophilus Roessle** of the Delavan House, is now ready. It is preceded by a preface, containing an account of the author's life, from the pen of **Henry S. Olcott**. The price of the book is $1.

Mr. **Roessle** is very concise in his style, and 60 or 70 pages of large type, comprise the whole results of his experience with the celery plant. There is considerable in his instructions which will probably be novel to the gardener, and at first perhaps received with doubt. But coming as it does, from a man who has *proved* in long practice the correctness of what he writes, and who claims that equal success is attainable by any one who carefully follows the directions he gives, we can but regard this brochure as worth its price to any grower or lover of celery. It is illustrated, it should be added, with a number of Colored Plates, and comprises the care and treatment of both summer and winter crops of this vegetable.

Enlargement.—Our friend **Wm. Thorburn**, whose seed store on the corner of Broadway and Maiden Lane, Albany, has been well known for twenty years or more, has found it necessary, from the increase of his business, to enlarge his borders, which he has done by annexing the the adjoining store. The partition having been removed and the two stores made into one, he has now a spacious establishment, well filled with all the varieties of seeds necessary for the farm and the garden. See his advertisements.

Pleuro-pneumonia.—A communication having been lately received by the Royal Agricultural Society of England from the Central Society of Agriculture in Belgium, requesting information on Pleuro-pneumonia and the means adopted to combat the disease, having particular regard to the effects of inoculation—a reply was ordered to be made that inoculation was not found in Great Britain to rest on any scientific basis, and as such it has not received the sanction or support of the Royal Society.

Trial of Reapers, &c.—The Royal Agricultural Society of Holland propose to have an exhibition and trial of steam cultivators and reaping machines in August next; offering first and second prizes of about £30 and £15 in each class. These sums of course are not likely to tempt competition; but the probability of custom is. The level lands of Holland are particularly well adapted for both these machines.

☞ Mr. Edw. Elliott, of East Greenbush, has laid on our table some specimens of a seedling sweet apple without name. They were in good order, showing at least the possession of fine keeping qualities.

Wheat for Cattle Feeding.—The London Agricultural Gazette, in answer to the inquiry—"which is the cheapest food for cattle—wheat, barley, oats, cake, maize or beans?—says:

> "At the present prices the first of these is as economical as any. Wheat at 1*d*. per lb., is as cheap a food as can be bought—if we except some of the cheaper but still somewhat doubtful kinds of cattle cake. It is used by almost every cattle or sheep feeder we know; and even the game keeper knows nothing cheaper than the best wheat for his birds. These uses of it must enormously increase its consumption, and the low price which it maintains in spite of this unusual demand is as remarkable a thing in its way as is the high price of mutton in the face of the enormous supply of sheep weekly poured into the metropolitan market."

☞ An act of incorporation has recently passed the Legislature of Pennsylvania, for an association whose design it is to institute a "Model Farm," to be located probably in Chester, Delaware, or Montgomery county, including also a Botanic Garden, and opportunities, in connection with the Polytechnic College at Philadelphia, for the instruction of a limited number of Agricultural pupils. The Philadelphia Ledger states that "the list of corporators includes the names of some of the most energetic, respected and wealthy citizens of the five south-eastern counties of the State, men of action, who never begin an enterprise which they do not carry through." The capital stock is fixed at $50,000, and it is thought such an establishment may be so managed as to be an interest-paying as well as a useful and practical institution.

Good Crop of Oats—Benefit of Draining.—Mr. **Albert Van Voast**, Pond Grove, Schenectady, believes in thorough draining, having carried it out on a large farm. He bought in 1858, eight and three-quarters acres of land adjoining his farm, which had been so run down, that it had not rented for years for more than a dollar an acre. He underdrained it thoroughly, and sowed it to oats last spring. His account with the crop is as follows:

Oat Lot—8¾ acres, Dr.	
To 9½ days team plowing, dragging, &c., @ $2.50,	$31 25
" 2½ do. sowing, &c., @ 75c.,	1 88
" 24 bushels of oats for seed, @ 54c.,	12 96
" 28 days cradling, binding, &c., @ 75c.,	21 00
" 2 days, team drawing in barn,	5 00
Interest on land at $700,	49 00
Tax,	4 00
Total,	$114 09
Add threshing 550 bushels @ 3½ cents,	19 25
do. for cleaning,	5 00
Total,	$138 34
Credit.	
By 550 bushels, @ 40c.,	$220 00
" 9 tons straw @ $5,	45 00
Total,	$265 00
Deducting expenses,	138 00
Profit,	$127 00

Here is a clear profit of over $14 per acre, after deducting $7 per acre for rent, from land which before draining would not rent for more than $1 per acre.

Careless Letter-Writers.—We lately received a letter from a subscriber, complaining that he had been cheated by a person who some time since advertised some seeds in this paper—that is, he had sent the required stamps, but had received no seeds in return. Knowing the advertiser to be an honest man, we sent our correspondent's letter to him, that he might explain the cause of the failure. In reply he says—"I have received over 300 letters since the publication of my advertisement in the **Country Gentleman**, and in twelve of them the writer's name is wanting, and several of them no post-office or any thing else by which I could find out his residence, is given. I have now over 20 of these letters which I have been unable to answer, either for the want of the name or residence of the writers. These letters have given me a vast deal of trouble, and I wish you would try to impress upon your readers the necessity of giving their full address." Our advice to those who have sent stamps for seeds, and have not received them, is to write again, and be careful to give their names, post-office, county, and State.

Oregon Timber.—The trade in wood for 1859 at London, as reported in the Farmer's Magazine, shows the arrival there of four cargoes from Oregon and Vancouver's Isle—"magnificent trees," it is stated, "said to be *Abies Douglasii*—creating as much wonder in the naturalist as in the trade." Their chief purpose is for masts, for which it is added, they "combine all the qualities required, and have already attracted the attention" both of the British and other foreign governments—"in length from 100 to

130 feet; in diameter 30 to 39 inches throughout their length—straight, without knots, with scarcely any sap, sound, strong and not weighty."

☞ The Seventh Annual Report of the Secretary of the Massachusetts Board of Agriculture, for the year 1859, is at hand with commendable promptness. The attention of the Board during the past year, has been occupied chiefly in the collection of statistical and other information upon various subjects relating to agriculture, and the results of its investigations are embodied in the reports of the committees to which special topics were assigned, presented and accepted at the annual meeting in January. The Horticultural information contained in the report on general Fruit Culture, is interesting and useful. The reports of the Delegates to the various exhibitions of the county and other societies, are a valuable feature. An Appendix contains the general Statutes relating to Agriculture, recently passed or amended, including the Dog law, the law for the preservation of certain animals and birds, &c.

☞ Mr. E. W. **Dennison**, of 163 Washington-st., Boston, has sent us samples of Tree and Plant Labels manufactured by him in Wood and Zinc. There are four sizes in wood, so cheaply furnished as to make it an object for plant-growers and nurserymen to purchase instead of making them—the price being only from 40 to 62 cents *per thousand*. Of the zinc labels there are three sizes, intended to be attached by wire, and written upon with a chemical ink, a receipt for making which is given, or it can also be had ready made of Mr. D. The price of the zinc labels is from $2 to $3 per 1,000 only. Samples of the whole may be seen at this office.

Does Gypsum Serve to Fix Ammonia in Stables, &c.—Statements and recommendations, implying sometimes a positive and sometimes a negative answer to the above question, may be found in the columns of this paper. Some of our correspondents incline to one view, and others to the opposite one. One correspondent not long ago expressed himself as quite skeptical as to the property usually ascribed to gypsum when merely sprinkled in the dry state upon the floor of a stable or upon a manure heap, basing his doubts or disbelief upon the fact that while dry or undissolved, plaster can absorb but little or none at all, and that it requires about 500 parts (say ounces) of water to dissolve one part (ounce) of this substance.

While such diversity of opinion exists, perhaps no one will be acknowledged as competent to decide the question *with authority*, save some chemists of established character and skill. But meanwhile, the decision pronounced by the Editor of the *N. British Agriculturist* is worthy of consideration. He says—"It (gypsum) is found in practice not to be a good fixer of ammonia in stables, byres, &c." *

☞ The editor of the Boston Cultivator has seen a part of the fat sheep fed by **Jurian Winne** in this county, and noticed lately in our columns. Our contemporary says that only 120 had then been slaughtered, the averaged dressed weight of which "was 96 lbs. each. We understand that Mr. Winne received for the lot, seven and one-eighth cents per pound, live weight—probably amounting to eleven or twelve dollars per head. They were unquestionably a very superior lot—some good judges say the best they have ever seen in this country."

Peas with Spring Rye.—One of my neighbors has always made it a practice to sow peas with spring rye. One gives support to the other, and the rye keeps the peas from lodging, they then being less liable to mildew. When harvested and threshed they can be easily separated, and thus two crops are secured in one season from one piece of ground, with very little extra labor. S.

Millet for Milch Cows.—Elijah Wood, Jr., of Concord, Mass., who has been for twenty years in the milk business, said (as reported in the N. E. Farmer,) at a recent agricultural meeting in Boston, "If I can attribute my success to any one crop, it is millet. I first cut two tons of millet, and soon increased it to twenty tons. * * Millet is not so good as English hay, but is worth two-thirds or three-fourths as much." He sows a peck of seed to the acre. Mr. W. commenced with four cows, but in fifteen years kept twenty-four cows on the same farm, and is now keeping 80 head of cattle, having leased another farm.

Large Hogs.—Having lately sent you an account of a few crosses of large, heavy, fat hogs made by some of our Burlington county farmers this year, I now send you the account of six hogs fed and killed by Benj. White, near Jacksonville, of this county—*one each year in six successive years*—viz:

In 1847,	Weight	606	pounds.
1848,	"	587	"
1849,	"	823	"
1850,	"	837	"
1851,	"	846	"
1852,	"	792	"

All net dressed weight—averaging 748½ pounds each.

Other instances of individual hogs of large weight might be given; but this being for six consecutive years, we think hard to be beaten. **Watson Newbold.**

Burlington Co., N. J.

Proper Depth of Planting Corn.—At a recent meeting of a Farmer's Club in Illinois, Mr. Waterbury read the following table, from the old *Prairie Farmer*, showing the time at which corn came up when planted at different depths, from one to six inches:

No. 1—1-inch corn came up in 8½ days.
2—1½-inch corn came up in 9½ days.
3—2-inch corn came up in 10 days.
4—2½-inch corn came up in 11½ days.
5—3-inch corn came up in 12 days.
6—3½-inch corn came up in 13 days.
7—4-inch corn came up in 12½ days.
8—4½-inch corn—
9—5-inch corn—
10—5½-inch corn came up in 17½ days.
11—6-inch corn—

Nos. 8, 9, and 11, were dug up after 22 days, and it was found that No. 8 had one inch more to grow to reach the surface; Nos. 9 and 11 had just sprouted, but were short, and were within three inches of the surface. No. 10 came up in 17½ days, but the tender leaf remained green only six days, and then withered. The more shallow the seed was covered by the earth, the more rapidly the sprout made its appearance, and the stronger afterwards the stalk.

Mr. Waterbury said his experience taught him that three-quarters of an inch was the best depth. He would step on the hill after planting; this would pack the ground, and the dews would keep it moist.

At a meeting of the trustees, held on the 13th April, Rev. Dr. J. W. **Scott**, late President of Washington College, Pa., was elected President of the Maryland State Agricultural College.

Sprouting Seed Potatoes.—The Rural New-Yorker gives an account of some experiments with potatoes, showing that "from a whole potato, as a general rule, only from two to four of the strongest eyes grew, the others remaining dormant—the eyes obtaining the first start appearing to have exhausted the nutriment in the potato before these slower in growing had got ready to claim their share. The same potato cut in two, three, or even four pieces, would give about the same number of shoots to each set, though the smaller the sets the weaker were the shoots. To these rules there were some exceptions, for occasionally most of the eyes in a whole potato would commence growth about the same time, and a good many small shoots would be the result, while sometimes a very small set would give one or two strong shoots."

English Farming.—The Detroit *Tribune* copies the published report of the second lecture on English Agriculture, delivered at the recent Yale Course by one of the editors of this paper, prefacing an extended editorial notice with the following paragraph:

We have before remarked that of all the Agricultural tourists and "commissioners" who have crossed the Atlantic for the purpose of studying European Agriculture, L. H. Tucker appears to have taken the best course for deriving benefit from the excursion. He has visited the best agricultural districts of Great Britain, Ireland and France, also the principal exhibitions or cattle shows and the most celebrated farmers, and held a "big talk" with men whose practical knowledge of productive farming is beyond question. When the valuable information which Mr. Tucker has acquired, is diffused far and wide through the large circulation of the *Country Gen-*

tleman, of which he is one of the editors and proprietors, a vast amount of good will be conferred on the farming community.

Pea-nuts.—"The pea-nuts may be sown in Virginia and more south, from April to May, and more north or west one month later; it is necessary to have the ground plowed, and drills made one foot broad and the hills six inches high, all parallel. It is on the top of these hills that the pea-nut seeds are put from one to two inches deep and from six to eight inches apart. When the plant begins to grow they are hoed and hilled—this operation is renewed when the seed is formed, and would be injurious in the time of blossoming; the ground must be kept clear of weeds."

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AGRICULTURAL SOCIETIES.

☞ The Kentucky State Ag. Society are to hold two Tobacco Fairs in May—one at Paducah on the 9th, and the other at Louisville on the 16th. At these Fairs over $2,000 is to be paid in premiums on Tobacco. Their regular State Fair is to be held near Bowling Green, commencing Sept. 18, and continuing five days. R. W. Scott, Esq., Frankfort, is the Secretary, to whom communications may be addressed.

☞ The next State Fair of Illinois is to be held at Jacksonville, beginning on the 10th and closing on the 15th of September. A premium of one thousand dollars is offered for the best steam plow.

Indiana State Fair.—I notice in the last number of the Journal of the N. Y. State Ag. Society, an erroneous announcement of the time of our State Fair. The Indiana State Fair will be held at Indianapolis, commencing on Monday, the 15th Oct., and continue during the week. We are fitting up new grounds of over thirty acres, with new structures and greatly improved general arrangements. Our Premium List of *Twelve Thousand Dollars Cash*, embraces Four premiums on Stock of $200 each, Ten on Stock, Farms and Machinery, of $100 each, and some thirty or forty premiums of $50 each, being nearly double the amount ever given before. W. T. Dennis,

Sec'y Ind. State Board.

☞ The 10th Annual Fair of the Putnam Co. Ag. Society, will be held at Brewster's, on the 25th, 26th and 27th days of September, 1860, (Tuesday, Wednesday and Thursday.) The officers of the Society are,

President—Chauncy R. Weeks, Carmel.
Secretary—G. Mortimer Belden, Carmel.
Treasurer—Saxton Smith, Putnam Valley, and six Vice Presidents.

Officers of the Ontario Co. Ag. Society for 1860:

President—William S. Clark, Victor.
Vice-Presidents—Wm. G. Donelson, Bristol; C. Edward Shepherd, Canandaigua; Theodore Sprague, E. Bloomfield; Lindley W. Smith, Farmington; John Robinson, Gorham; John H. Benham, Hopewell; Sanford G. Angevine, Manchester; Lester Sprague, Naples; David E. Hamilton, Richmond; Wm. Johnson, Seneca; Shotwell Powell, South Bristol; J. H. Boughton, Victor; Hiram Taft, W. Bloomfield; Joshua Swan, Canadice.
Cor. Secretary—Gideon Granger, Canandaigua.
Rec. Secretary—John W. Holberton, do.
Treasurer—George Gorham, do.
Town Committees of three from each town in the county.

Niagara Co. Ag. Society.—I send you a list of the officers of the Niagara Co. Ag. Society for 1860:

President—Franklin Spalding, Lewiston.
Vice President—O. P. Knapp, Lockport.
Treasurer—E. A. Hall, do.
Secretary—P. D. Walter, do.
Directors—D. A. Van Valkenburgh, Lockport; Philip Freeman, Royalton; Wm. Robinson, Lockport; Thos. Scovel, Cambria; A. Campbell, Newfane; D. Basserman, Lockport.

The Society have, for several years past, held a Fair and Show in the spring, for the exhibition of stock animals, that the farmers may have a better opportunity for selecting such as they would prefer to breed from—also for the sale of stock, seeds, implements, &c., &c. This year the spring Show will be held at Lockport on the 3d of May. K.

☞ The Onondaga County Fair is to be held at Syracuse, Sept. 26, 27 and 28.

☞ The second Annual Fair and Cattle Show of the Afton Agricultural Society, will be held at the village of Afton, Chenango Co., on the 12th and 13th of Sept. next.

STEEL PLOWS.

STEEL PLOWS.—We are manufacturing for the spring trade large numbers of our Mohawk Valley Clipper Plows with steel mold-board and land-side, with steel or cast point, as desired, and would refer you to the following persons, who have them in use:

John Johnston, Geneva, N. Y.
J. Ingersoll, Ilion, N. Y.
Wm. Summer, Pomaria, S. C.
R. C. Ellis, Lyons, N. Y.
Col. A. J. Summer, Long Swamp, Florida.
A. J. Bowman, Utica, N. Y.
A. Bradley, Mankato, Minesota.
F. Mackie, Utica, N. Y.

We are also manufacturing Sayre's Patent Horse Hoe and Potato Covering Machine, Sayre's Patent Cultivator Teeth in quantities for the trade; and all kinds of steel and swage work in the agricultural line. Send for a circular, SAYRE & REMINGTON,
Jan. 26—wtf Mar. 1—mtf. Union Agricultural Works, Utica, N. Y.

NANSEMOND SWEET POTATO PLANTS,

Of superior quality, packed to go long distances safely, by Express: 400, $1: 1000, $2; 5000, $9; 10,000, $15—during May and June. Our Plants have produced fine crops in the North for many years, even as high as 44°.

Circular of directions in culture, and experience of our patrons, sent for a stamp. C. B. MURRAY,
(late O. S. Murray & Son,)
Foster's Crossings,
Mar 29—weowtf | May 1m1t Warren Co., Ohio.

LAWTON BLACKBERRY.—To obtain the original variety for field or garden culture, address
WM. LAWTON, New Rochelle, N. Y.
☞ Circulars, with ample directions, will be forwarded to all applicants, free. Aug. 1—m12t.

BUCKEYE PREMIUM MOWER.

WITH FLEXIBLE FOLDING BAR.

The farmer intending to purchase a Mower, will find it to his advantage to examine the Buckeye for 1860, which combines all those features which have given it its present reputation, that of

THE BEST MOWING MACHINE IN THE WORLD.

together with several important improvements added the present season.

AS IT APPEARS IN THE FIELD.

The machine is supported on two driving wheels, which act together or separately, keeping the knives in motion in turning either to the right or left.

The cutter bar is attached to the frame by a DOUBLE HINGE JOINT, which allows either end to rise or fall without affecting the other, adapting itself to all inequalities of the surface, and also adding greatly to the strength of the machine.

WHEN NOT IN USE THE CUTTERS CAN BE INSTANTLY FOLDED OVER THE FRONT OF THE FRAME, RENDERING THE MACHINE AS PORTABLE AS A COMMON CART.

One of the strongest proofs of the great success of the Buckeye Mower, is found in the fact that, since its introduction, so many other machine manufacturers have changed the construction of their own machines, and introduced features in IMITATION of the BUCKEYE. These imitations are all necessarily failures, as the desired advantages cannot be attained without infringing the Buckeye Patents.

The DOUBLE JOINTED, FLEXIBLE BAR, BELONGS EXCLUSIVELY TO THE BUCKEYE MOWER, AND IS SECURED BY THE PATENTS OF SYLLA & ADAMS, AND AULTMAN & MILLER, WHICH PATENTS WILL BE FULLY SUSTAINED AGAINST ALL INFRINGEMENTS.

The greatest care will be taken in the selection of material, and the construction of the Machine, and the Buckeye of 1860 will present more claims than ever before, to the consideration of the farmer wishing to secure the best Mowing Machine.

Orders must be sent early to Secure Machines. My unfilled orders of last season amounted to several hundred. Descriptive Circular, with testimonials, forwarded by mail.

JOHN P. ADRIANCE, Manufacturer and Proprietor,
Poughkeepsie, N. Y. and Worcester, Mass.
Warehouse 165 Greenwich St., near Courtland, New-York.
SCHOONMAKER & JOHNSON, Agents,
Coeymans, Albany Co., N. Y.
JAS. WALKER & CO., Agents,
April 26—w&mtf. Schenectady, N. Y.

THOROUGH-BRED NORTH DEVONS.

EUGENIA, (—) 3 yrs. old, with Bull Calf by "Young Comet" by her side.

VICTORINE, (—) to calve in May—served by imported Duke of Devonshire.

Two young DEVON BULLS, imported sire.

AYRSHIRES and ALDERNEYS, male and female.

ALFRED M. TREDWELL,
45 Fulton st., New-York.

☞ Residence—Madison, Morris Co., N. J. Ap 19—w4tm1t

EUROPEAN POTATOES.

I received, two years since, from the Seedsman to the Imperial Agricultural Society of France, a collection of ONE HUNDRED VARIETIES OF POTATOES, selected as the BEST, from upwards of Five Hundred varieties, collected from all parts of the world, and cultivated by that Society for the purpose of testing their quality. This collection has been carefully cultivated during the past two seasons, and specimens exhibited at some of our State and County Fairs, which have attracted much attention. From these, SEVENTY-FIVE VARIETIES have been selected, which for their productiveness, fine flavor, and freedom from disease, can be recommended as every way desirable for general cultivation.

For the purpose of introducing as extensively as possible, I have put them up in collections as follows, which can be sent by Express to any part of the country:

75 varieties,	3 potatoes each, each sort distinctly labeled, ...	$5.00
50 "	10 " " " " ...	4.00
25 "	20 " " " " ...	3.00

Also Davis Seedlings and Dovers at $1 per bushel. Orders must be accompanied with cash. Address B. K. BLISS,
Ap 19—w4tm1t Springfield, Mass.

OSIER WILLOW CUTTINGS—

The best variety for market and for live fence, (Salix purpurea)—price $3 per 1000. By mail, postpaid, for experiment, $1 per 100.

D. L. HALSEY,
Mar 15—w7tm2t Victory, Cayuga Co., N. Y.

CRANBERRY PLANTS

of the best known varieties, grown on upland and on lowland. Price $6 per 1000. By mail, postpaid, $1 per 100.

D. L. HALSEY,
Mar 22—w7tm2t Victory, Cayuga Co., N. Y.

MARBLEHEAD DRUMHEAD.

This Cabbage is by far the most popular and profitable kind sold in Boston Market. It originated in Marblehead, Mass., and holds the same rank among cabbages as the Hubbard squash among squashes, being distinguished for its reliability for setting a symmetrical head remarkably hard and heavy. It is early, very fine grained and sweet, with a stump, when properly cultivated, of but one to two inches in length. Under fair cabbage culture, ninety-five per cent. will set good heads to the acre; under good culture, frequently every plant on an acre will set a marketable head. A package of the best variety of this cabbage, the Stone-Mason, containing seed more than sufficient to raise a winter's supply for one family, forwarded post-paid to any part of the United States for 25 cents. One pound of seed forwarded post-paid on the receipt of $4, or for $3 to parties paying their own freight. I aim to introduce no product new to the public that will not be a full return for the money they invest. I will give five dollars to any person for one ounce of seed of any Drumhead Cabbage, that will excel this variety. JAMES J. H. GREGORY,
Mar 29—w7tm2t Marblehead, Mass.

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Known as the "COLDEN MANSION FARM," situated in Coldenham, Orange Co., N. Y., 7 miles west of Newburgh, on the Newburgh and Cochecton Turnpike.

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Mar 8—w7tm2t

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Our motto has ever been and still is to furnish the BEST ARTICLES at the LOWEST PRICES.

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GARDEN AND FIELD SEEDS

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"Hoyt's" Superphosphate of Lime, the best in the market.

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Feb. 9—w&m3mos. Proprietors.

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Farmers, Gardeners, Nurserymen, Fruit-growers, Dairymen, Cattle Dealers, and all persons interested in tilling the soil or adorning their grounds and dwellings, will be supplied with the most complete assortment of Books relating to their business that can be found in the world, by

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Mar 15—w15tm3t

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Ap 5—w&mtf

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Imported by the American Guano Company, N. Y.

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Orders from the country will be promptly attended to. For full particulars and pamphlets—Address AMERICAN GUANO CO.,
No. 66 William Street, New-York.

The above Guano is for sale at 366 Broadway, Albany.

April 5—w9tm1t. WILLIAM MITCHELL, Agent.

TO FARMERS AND GARDENERS.—

The subscribers offer for sale 60,000 barrels of POUDRETTE, made by the Lodi Manufacturing Company, in lots to suit purchasers. This article is in the twentieth year of its introduction into this country, and has outlived fertilizers of every other description, for the following reasons:—

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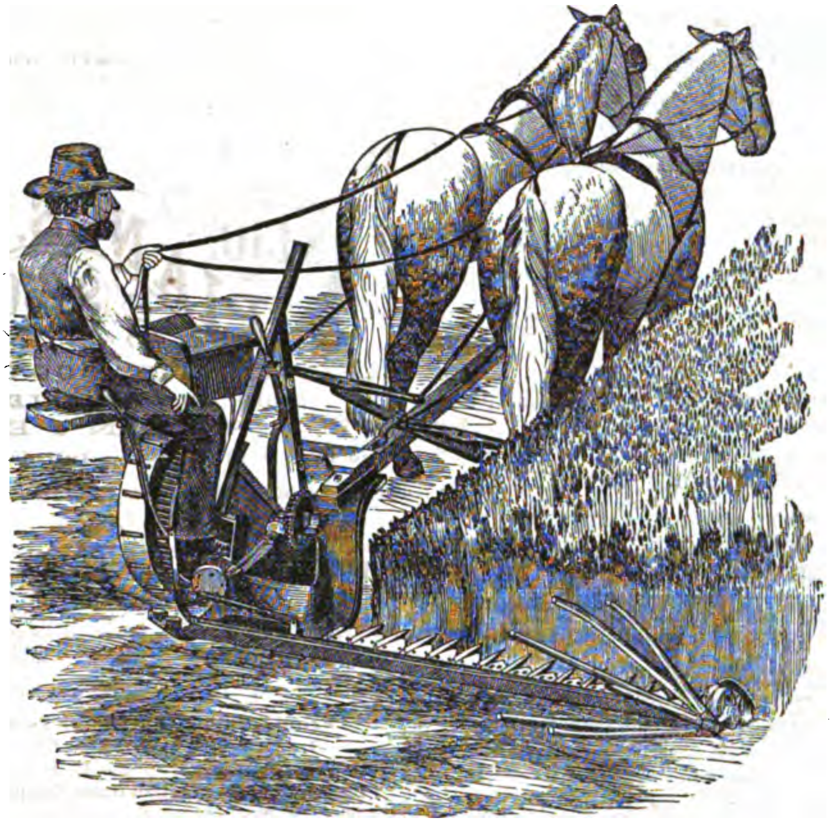

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LIGHTNESS OF DRAFT is one of the most important points to be looked to in selecting a Mowing and Reaping Machine. To secure this the Machine itself should be light, and yet made of such material as to insure perfect strength, durability, and freedom from injurious effects produced on some machines by exposure to the weather. The frame of the Kirby machine is made of iron, in one piece, and of such form as to secure the greatest strength with the least possible weight. The boxes of the gearing shafts are cast on, and are a part of this frame—thus securing beyond a doubt that all the gearing shall retain the same relative position, without reference to exposure to wet or heat, as long as the machine lasts; while in machines with wood frames, or frames of wood and iron combined, the relative position of the gears and all the bearings must inevitably be changed by every exposure to rain and sunshine; thus the gears are made to mash too deep and run hard, or not deep enough, and actually slip gear, and any one at all acquainted with the qualities of timber can see that the working and draft of a machine may by this means be very much affected, and from this cause alone may possibly become entirely useless in two or three seasons. The Kirby is free from any such objection. The boxes are lined with Babbit metal, and the longer it is used the easier it will work. Send for book with full description and the opinions of those who have used them.

Glenville, Schenectady Co., N. Y., Sept. 26, 1859.

Gentlemen—I have used one of Kirby's American Harvesters two seasons, and am perfectly satisfied that in respect to durability, lightness of draft, ease of management and quality of work, it is surpassed by no other machine with which I am acquainted, either as a mower or reaper, and there are a number of different machines in the neighborhood. I have used it on both smooth and rough ground, and am satified there is no machine before the public which, for lightness of draft, amount of work, and ability to keep the surface of the ground, through ditches and over stones, free from side draft, comfortable position for the driver and raker, workmanlike manner in which the grass and grain are cut and laid, and durability, all considered, combine so many advantages as this machine; therefore I cheerfully recommend it above all others, to any farmer who wishes a machine.

Yours, **DANIEL KNAPP.**

To D. M. Osborne & Co.

Canajoharie, Feb. 21, 1860.

Messrs. B. & A. Smith: Gents—I have used your Kirby American Harvester the past season with entire satisfaction, both as a Mower and Reaper. I have cut lodged clover around the piece, cutting it the way it was lodged, shorter stubble than my neighbors did with the Hallenbeck machine, cutting against the lodge. I am satisfied I did much better work than I could have done with the scythe or any other machine that I have used. As a Reaper, I do not think it has an equal; it reaps perfectly, cutting all of the grain and delivering it so it will dry about as well as from the cradle. I am satisfied a farmer will save enough with it from his farm in one year, more than he could with the cradle, to pay the price of the reaper attachment. Its independent action of the driving-wheel, allowing it to be in a dead furrow, and passing over obstructions without interfering with the cutter-bar, so it cuts a uniform height of stubble, is a great superiority over all other machines I have knowledge of. In lightness of draft, and freeness of side draft, it has no equal, and the perfect control the driver in his seat has over the machine, makes it the most desirable machine in the market; and I can cheerfully recommend my friends in want of a machine, to buy the Kirby American Harvester, and to buy the combined machine; for a farmer is short-sighted to buy a machine that will do but half of his work, when for a little extra he can get one to do all. **EDWIN WILLIAMS.**

Minden, Montgomery Co., N. Y., Jan. 24, 1860.

Messrs. B. & A. Smith: Gents—The Kirby American Harvester that I bought of you this season, has given me entire satisfaction. I consider it by far the best Machine in use in this section, and I am familiar with most of the prominent Machines. I have used a Ketchum Machine for six years, and sold it this summer. I decided to try the Kirby, because I consider it by much the best Machine in lightness of draft and its adaptation to uneven surfaces. I know of no Machine that will in any way equal it. It works perfectly as a Reaper. I reaped all my grain with it. I would recommend it as fully for reaping as mowing. I am at a loss to understand why a farmer will buy a machine that will mow only, when he can get one that will do the whole work. You have but to get a farmer to try the Kirby, and he is sure to buy it. Yours respectfully, **H. C. SANDERS.**

The undersigned, having used Mr. Sanders' Kirby Machine, and seen it at work, join with him in recommending it to the public as a very perfect and desirable Machine, and would say that it is far ahead as a Mower and Reaper to any other machine in this section.

JACOB SANDERS.
S. F. SMITH.
Jan. 24, 1860. JACOB P. BELLINGER.

Fishkill, Duchess Co., N. Y., Jan. 1, 1860.

D. M. Osborne & Co.: Gents—The Kirby Machine I bought of your agent at Poughkeepsie, works to a charm—it suits me exactly. As a Mower, I found the draft light, very easy for two horses; there is no weight on the necks of the horses, and very little side draft. I can mow an acre of grass an hour with ease. For simplicity, durability, and strength, the Machine is superior to any I ever saw. I cut twenty-five acres grass over smooth, rough and uneven ground, and it travels over small ditches without any difficulty. The independent action of the finger bar I consider a decided improvement; it makes the machine better aeapted to rough, uneven ground. Keep the knives sharp, and there will be no difficulty in mowing any kind of grass, either coarse or fine. I consider the Kirby Machine preferable to any other I have seen, and would cheerfully recommend it to any that need one. Yours, &c., **SYLVESTER TOWNSEND.**

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April 12—May 24

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They are so improved as to be taken down and packed in boxes for transportation. One dozen can be packed in a box of about six cubic feet. We also make the Grapevine Cradle. All of the above are made of the best material and workmanship. For Price List, address

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WM. S. CARPENTER, 468 Pearl street, New-York.
Ap 26—w4tm1t

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VOL. VIII. ALBANY, N. Y., JUNE, 1860. No. 6.

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"THE COUNTRY GENTLEMAN," a weekly Agricultural Journal of 16 quarto pages, making two vols. yearly of 416 pages, at $2.00 per year, is issued by the same publishers.

Editorial Notes Abroad.

No. XXXI—VISIT NEAR NORWICH.

The Norwich Cattle Fair—the Grain Market or Corn Exchange—Plumstead and Agricultural Pupils—the Wire Worm—Live Stock—Merits of Different Breeds of Sheep and Cattle—Pleuro-pneumonia and Insurances on Cattle and Crops—Threshing, Farm Profits, Box-Feeding, Gas Lime, &c.—Hedges, a Garden Seat and conclusion.

It was the object of the last letter in this series, to convey a general idea of the County of Norfolk, and the productiveness there attained. With Mr. READ, to whom, by conversation and through the Essay already alluded to, I was indebted for many of the facts there detailed, I had the pleasure of visiting Norwich Hill on the day of the weekly Fair or cattle-market.

We are as yet deplorably deficient, as a general rule, in anything exactly corresponding to the fairs, markets and market-days of Great Britain. I shall not attempt at present to point out their advantages, as opportunities will be hereafter afforded for recurring more particularly to the subject. That they form a part, and an essential part, in the *machinery*, so to speak, of English Agriculture, no visitor can fail to observe; and, in the facilities for buying and selling, for selection on the part of the farmer who purchases, and competition of bidders for the farmer who has anything to dispose of, their establishment and regular recurrence at stated times supplies an advantage parallel in some respects to that which the British cultivator also possesses over us, in the readier and more abundant *obtainableness* of experienced agricultural labor.

Norwich is a city of the ancient times, but the old Castle that surmounts its highest summit is now occupied as a prison, and the triple battlements that protected this Norman keep, have not for many years frowned down upon any force more warlike than the humble company that occupies on Saturdays the crowded pens below—gathered from every part of the kingdom to eat of the production of Norfolk husbandry, so that in the end the hungry eaters of the metropolis may be filled. In fact it is estimated that not above one bullock in twenty that is grazed in Norfolk is bred in the county, and all sorts of cross-bred bullocks find their way thither to be sold and fattened. If I am not mistaken, we saw some of the old long-horned stock, which at one time had a brush with the Short-horns for supremacy; there were also Irish cattle not quite so long in horn or large in frame as those, but *thicker*, and described to me as better to take on flesh; there was Scotch blood, too, but the canny North Britons have learned, they said, to keep the best at home for their own feeding; and so the collection—that day scarcely so full I think as usual—was made up, and the farmer who went out to buy had need be good in judging to know what to choose and how much to pay. There were sheep and lambs in large numbers, quite generally I think of a Leicester cross, although the marks of other breeds might also be detected. And to conclude, a stable-full of horses were to be brought out at a later hour under the hammer of the auctioneer. The pigs we did not look at.

In some cases there are corporation or other *tolls* on the animals marketed, and thus an accurate register of the sales is kept. There is no such guide to consult in regard to the number disposed of at Norwich, but with the construction of railroads, the attendance there is said to have been annually increasing in magnitude "to the extinction of almost all the local fairs in the county." Norwich, it may be added, is a city much the size of Albany.

My attentive conductor also went with me to the corn-exchange, where, very appropriately, a portrait of Mr. COKE looks down upon the proceedings of many who cherish his memory and example. Here the farmers of the county, when they are ready to sell their grain in whole or in part, bring samples of what they have, and the corn-brokers and millers who occupy stands in the apartment, examine the quality of what is offered, and conclude their arrangements for purchase. Dispatches constantly received from London show how the markets there are tending, and, if the prices do not suit, the farmer's pocket will carry his samples back again as easily as it brought them. There is generally an "ordinary" or general dinner, set at the public houses frequented by the farmers, and as the same circles meet so frequently at the same places, mutual acquaintance and association of interests are promoted. Pipes and tobacco often constitute the concluding luxury, in the enjoyment of which our English brethren have nothing to learn from us—indeed I was scarcely prepared to find the "weed" still in so high and general estimation, puffed in the primitive pipe with long and curving stem.

Some notes jotted down in visiting "Plumstead," as Mr. Read's farm, several miles from Norwich, is called—will be read, I am sure, with an interest equal to the kindness with which he afforded its hospitalities to an unexpected stranger. It is illustrative of the spirit and intelligence which he has brought to its management, and I hope not a matter of indelicacy previously to mention that Mr. Read is still a young man, graduated as a farmer after some years' experience in managing for others, acquired upon estates in South Wales, Oxfordshire and Buckinghamshire, and having proved his powers of observation in all three instances by the preparation of Reports upon the Farming of the Counties named, which received the Prizes of the Royal Agricultural Society. Since his occupancy of his present farm, he had, like many of the best farmers in England, taken several pupils for instruction in the practical details of Agriculture. There are always many desirous of such instruction, either the sons of farmers at some distance who wish to acquire a knowledge of the systems elsewhere in vogue, or sometimes young men from the city with a taste for rural life and pursuits; and in no way perhaps can a knowledge of farming be so well and thoroughly obtained. With three or four pupils, in the active seasons of the year, the oversight of all the transactions of the farm is explained and illustrated, practice in determining upon and performing them, is always to be had, and the exercise of judgment in relation to live stock of different kinds as well as field operations, is elicited and directed to proper standards. Lectures are given twice a week in winter, upon both theory and practice, followed by conversational discussions upon mooted points or farther explanation of difficult ones. I do not doubt at all the correctness of the opinion expressed by Mr. R., that one year of such tuition, following a year or more spent at an institution like that at Cirencester, would provide the best education which an intelligent young man could have before undertaking the management of a farm, and I can not but wish that more of our good farmers could be induced to receive pupils into their families for similar instruction. The price paid there by the pupil is in the neighborhood of $850 per annum, but little if anything being expected from his labor; while, in many cases he provides himself with a horse, it may be for hunting or other purposes, which increases the price paid by him per year to about $1,000.

The land at Plumstead was last summer occupied nearly as follows:

In Wheat,	125 acres.	In Clover and Sainfoin,	100 acres.
In Barley,	125 do.	In Beans and Peas,	50 do.
In Oats,	50 do.	In Roots,	140 do.

The usual four-course system of rotation is employed, as might be anticipated. About 32 bushels of wheat per acre, 40 bushels of barley, and 48 of oats are regarded as average crops in this vicinity; 1¼ to 2 tons of hay are usually cut. Mangolds is a crop in growing favor, and will yield 30 tons per acre, bearing unlimited manuring, while turnips if pushed too hard are found to run mostly to tops and necks. The wire-worm is the greatest foe with which he has had to contend; coming along last spring, attacking the barley, touching the wheat a little, destroying the first sowing of mangolds, and a second sowing of Swedes put in to replace them, and doing much damage to the white turnips, which made a third sowing on the same ground. Some fields of mangolds, however, had escaped, and some of the Swedes had been only badly thinned.

As to live stock, the labor of the farm is partly done by oxen, 4 yoke and 16 horses being kept. The breeding flock of sheep numbers about a hundred, and in addition some three hundred are annually fed, together with one hundred bullocks. As to breeds, in conversation with regard to their respective merits, the remark was made that formerly meat was grown perhaps more for the *gentry;* or rather, that until more recently, flesh was put on at a cost, from the length of time required to mature it, which the wealthy could better afford to pay, while in point of fact, the poorer classes consumed comparatively very little. The South-Down, with its superior mutton, well-matured, for example, still furnishes what a landed proprietor desires to graze for his own eating, or the epicure to buy from his butcher; while, on the other hand, the great objects sought by the farmers who produce meat for the multitude of purchasers are hardiness and size, *combined with early maturity.* Without these three qualities, each of equal importance it may be—the Norfolk feeder cannot buy and sell at a profit. Continuing to speak of sheep, the larger kind of Leicester, or Leicesters with a tinge of Cotswold, (or perhaps Lincolnshire,) are said to give the desired size and maturity, and at the same time lengthen the wool; the purer Leicesters, as they are sometimes regarded, such for instance as those of Mr. SANDAY, perfect as they are of their kind and for some localities, are here considered too fine to produce a cross embodying all essential points so perfectly as the others. The ewes are the Downs, the best of them from Suffolk, hardier in constitution and finer-wooled than the males with which they are put.

It has been claimed here, and the opinion has its adherents in Great Britain, that the meat produced is really deteriorated as its maturity is forced; and there is little doubt that if one is content to wait the convenience of some of the old breeds in getting themselves ready for the knife, he may be better suited with the flesh they give him. But with sheep, the cross above described, for example, makes a better leg of young mutton, say when slaughtered at a year old, than could be had at similar age from the best South Down, while the latter would in turn be preferable at three years old. With cattle it is much the same as with sheep. There are still some, although not very many, Devons in Norfolk, notwithstanding Mr. COKE's efforts to popularize them there; they make excellent beef, and when ready to kill, you have a "nice fat little wretch"—but not *enough of him;* the size and still earlier maturity of the Short-Horn, and of Short-Horn crosses, therefore render their blood preferable to any other. It is observed in Mr. READ's Essay, of the cattle that are now offered for sale on Norwich Hill, that the quality of the Short-Horns has been wonderfully improving, or rather perhaps it was intended to say that the grade of Short-Horn blood has been becoming a higher one from year to year, as it certainly has with the beeves sold at the cattle markets of New-York; and especially he says, that the cattle now brought over from the Emerald Isle, bear very little resemblance to the long-horned breed originally produced there; "by judicious crosses with the Short-Horns," they now obtain what the English farmer calls "very *useful* cattle," that show "much of the quality of the new blood, yet retain a great deal of the flesh and frame of the old stock."

From the pleuro-pneumonia many cattle had been lost, and few lots of cattle were received from Ireland, Mr. Read informed me, that were not more or less infected with this complaint—if free from it when starting, often taking it, he said, by being crowded together in crossing the channel in vessels where diseased animals had preceded them. There are one or more companies to insure against loss from the pleuro-pneumonia, but as they did not take risks exceeding in amount something like half the value of the animal, he had never had recourse to this source of protection. The state of excitement upon the subject in this country, at the time of writing out these notes, is such as to lead me to wish that I had pursued my inquiries upon it a little farther. It was introduced into Great Britain by cattle from the Continent, and there seemed to be little doubt there of its being as infectious as it has here been represented.

The subject of insurance against a particular disease in cattle, was brought up by the casual mention of that of another kind, which illustrates singularly, as such little items often do, how Agriculture in Great Britain has been systematized, like commerce, into a branch of industry with its own risks to run, and its calculated chances of escaping them. Much grain is every year damaged there by *hail storms;* but by the payment of 6*d.* (say 12 cents) per acre for the surface sown, companies insure one against whatever loss may result from this cause. A storm the previous year had done much injury to a field of beans at Plumstead, but this insurance having happily been effected, appraisers on examining into the facts of the case, rated the loss at £27, (say $135,) which amount was duly recovered.

Portable engines are now to be found on many of the most extensive farms, for thrashing and other farm purposes, but thrashing is very frequently done by steam there, as in some parts of the country here it is done by horse-power—viz., one or more individuals owning an engine, will go from farm to farm to thrash out the grain as desired at a certain rate per quarter, or per *coomb*, a favorite Norfolk word, signifying a half-quarter or four bushels. I met a farmer who had been interested in one of these nomadic "steamers," as they are called, and from whom I gathered that the business, originally a quite profitable one, was now suffering rather from competition, or from the too common purchase by farmers of "steamers" of their own.

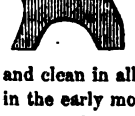
The rent here was 35s. per acre, or with tithes and poor-rates added, equivalent to about 45s., say $11.25. In the agreement between landlord and tenant, it is customary for the former to provide materials for any new erections that it becomes necessary or expedient to build, while the tenant pays for from one-half to the whole of the labor, according to agreement. In repairs, the landlord will keep the *exterior* of the dwelling and other structures generally, in order, painting as often as may be covenanted, say once in 3, 5 or 7 years, while the tenant must generally bear the burden of whatever *interior* painting, papering, &c., may be required.

It is a matter of some interest to know to what sources the profit of the farm is due, for in some years of the rotation taken by themselves, there is a constant outlay with little pecuniary return. Through the four years of the course, I understood that the annual cost of labor would average per acre about 30s., say $7.50; while, with prices as they had usually rated for several years, (the low prices of the past season being perhaps regarded as exceptional) the two "white crops," or the wheat and barley years in the rotation, should bring in a gross return of fifty dollars each per acre, and the other two years of clovers and roots, an equivalent to twenty dollars each per acre—that is an average return, for each of the four years, of $30 to $35 per acre over the farm. The difference between this sum and the land charges for rent, &c., and the sums paid for labor, will constitute, when further diminished by the heavy additional expenditures that are required for fertilizers, feeding materials, wear and tear of machinery, &c., the farmer's net avails for his own time and for interest upon the capital he has invested.

The box-feeding of cattle, which has been in growing favor, as compared with other systems, Mr. Read was preparing to adopt, I think; there is thought to be less food consumed, and the resultant manure is considered richer than when the cattle are fed in open yards. By adequate attention in keeping the litter in the corners and middle, level, no odor escapes even if the deposit remains undisturbed in the box from autumn until spring. On the other hand, Mr. R. remarked that the first cost of the boxes is greatly against them, and while tenants gladly employ them if provided by proprietors, the general preference otherwise appears to be for "small yards for 10 or 12 beasts, on two sides of which are warm and wide open sheds."

The character of the soil is such that draining is not necessary except for the purpose of cutting off springs, when one or two drains will dry an area of perhaps three or four acres. Sainfoin, succeeds well here, a plant that seems to require the presence of chalk or lime to flourish to advantage. Calcareous material may be cheaply had by using lime from gas works—on the subject of which there has been considerable inquiry here during late years. Mr. R. thought it might be a useless, or even a very destructive application, if not rightly employed. His way I understood to be, to spread about three tons per acre upon the land after harvest, for the turnips to be sown in June or the mangolds sown in May of the succeeding year. The price of this gas lime was only 62 cents for a load of about a ton and a half. Salt, which costs say $5.75 per ton, is also a common manure, applied at about two cwt. per acre, with an equal amount of guano for barley or oats after a wheat crop, as on a portion of the land a double grain crop is thus often taken.

As we walked out among the fields that refreshing English summer evening, after an American summer's day, the management of the white thorn hedges was among the subjects that came up, and I remember at least one practical suggestion. It is found better to trim them with a hook, than with shears, for although the latter process is neater and quicker, it is said to produce knots, while the hook gives a clean, healthy cut. I remember too, our sitting under the trees upon some benches in the simple contrivance of which I should have thought there might have been a touch of Yankee ingenuity, and which I should despair of rendering intelligible without the aid of a diagram. The seat was provided with a low back, and was itself composed of two boards, attached by hinges at *a*, as shown in the accompanying section, so that one of them with the back (*b*) would turn over and form a roof for the rest of the seat when not in use, keeping it dry and clean in all kinds of weather. One who has gone out in the early morning to find every garden chair a miniature pond, or a favorite roost for any stray bird that has reposed in the vicinity, will appreciate so ready a mode of protection.



In the morning my friend kindly drove me into the railway station, in season for a train to Elmham, where Mr. Fulcher—to whom I had been indebted for the suggestion of this visit at and near Norwich, as well as for the means, through Mr. Read's acquaintance, of acquiring much information as to the general agriculture of the county—was so obliging as to have a cart awaiting my arrival—and by a *cart*, I mean one of those very handy two-wheeled one horse vehicles, to which I have already alluded as universal there, and as being one of our as-yet-unattained conveniences. I was under farther obligations to Mr. Fulcher, which it will require another letter to explain, while I did not leave Plumstead, short as my visit there had been, without recollections of friendly attentions which I shall long cherish, and of much good farming of which I must again regret that I can now only present so detached and fragmentary a picture.

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[For the Country Gentleman and Cultivator.]

NUTRIMENT ACCORDING TO SIZE.

Eds. Co. Gentleman—There are but few, I presume, more ready than myself to lay aside theory, however plausible, when it is disproved by practice. But there are some things that do not admit of being disproved by practice, or in any other way. If a man was to tell us that he had proved by practical experiment, that a whole acre of ground of any kind would be just as thoroughly irrigated with any given quantity of water, as half the same area, or that it takes no more fuel to generate 1,500 volumes of steam than 1,000; or no more motive power to run a factory with 14 sets of machinery, than 9 sets—however much confidence we might have in his practical knowledge and general correctness, we should of course give these statements no credence, but indulge in the reflection, if not in the remark—even this man, too, falls into errors.

I have been to-day looking over some copies of the Co. Gent. which came while I was from home; and the above thoughts were suggested by reading an article from the pen of our friend John Johnston, in the paper issued 2d mo. 9th, in which he takes the strange position that "it takes no more to fat a steer that weighs 1,400 pounds live weight, than it does to fat one weighing 900 or 1,000 lbs.; and that the largest will always gain the most with equal feed, if they are of the same age." Also that "it takes no more feed to fat a lot of sheep averaging 140 or 150 pounds, than it does the same number averaging only 85 or 90 pounds." Or, in other words, it requires no more nutriment to sustain 1,400 pounds of animal organism of any given kind and quality, than to sustain 900 pounds of the same.

I think this must be acknowledged to be a fair statement of the position, for, if it took any more to sustain the 1,400 pounds in present condition, or in statu quo, than the 900, there could not be so much left to go to fat. And now I ask if these propositions are not just exactly equivalent to those above, and just as palpably erroneous? It seems to me the difficulty arises from drawing conclusions from partial and insufficient data. John Johnston tells us he arrived at this conclusion from feeding cattle meal in stalls, and finding the largest ones gaining the fastest. But he tells us he only gives them three to four quarts of meal per day, and feeds them hay in boxes in the yards, which they go to at pleasure; and further that this hay is of the very best quality.

Now is it not very plain that much the largest portion of the animal's gain is from the hay, of which he may eat as much as he pleases, and that the larger puts on more fat than the smaller animal, simply because he has the capacity to eat and digest more food. A steer that weighs 50 pounds more than another, because he is in that much better flesh, will not require so much food to keep him in that condition, as it will take to bring the other up to his condition; neither will a lot of sheep averaging 130 or 140 pounds, because they are fat, require anything like the food to keep them to that weight, or gaining a little, that it will require to bring a lot weighing 80 or 90 pounds up to 130 or 140 pounds. But if the position that 1,400 pounds of animal organism requires no more for its support than 900 pounds of the same kind, character and quality, age and all the attendant circumstances being alike, then I ask why should 2,000 or even 3,000 require any more than 1,000?

John Johnston says a steer fed 100 days, will gain more the last 35 than the first 65 days. This is no doubt correct, so far as gain in weight is concerned, if the animal is thin of flesh at the commencement. It takes considerable time of liberal feeding to bring the animal organism up to the highest development of health and strength of which it is capable; and until this is accomplished, the major part of the nutriment is consumed in strengthening the vital force, adding to the gastric juice and other fluids, and expanding and giving tone to the vascular, and dilating the cellular system. But when the animal reaches this point, then all the food he is capable of digesting, beyond what is necessary to sustain him in present condition, is added either in natural growth or accumulations of fat. And here lies the rationale of several important facts. The circumstances must be very extraordinary if a man can afford to keep his cattle or sheep poor, or allow them at any time to get poor.

On the prairies of the west, where millions of tons of grass go to waste annually, a man, if very short of food in winter, may afford to let his cattle get thin, if they do not get so thin as to lose their health, because they will recuperate in the summer without cost to him. But in the middle or eastern states, where food of all kinds is more valuable, it can scarcely ever be afforded. If a man does not feed his stock enough to keep them up to present condition, he loses not only what he feeds them, but a portion of animal flesh every day, and gets a little drib of poor manure in return. If he feeds them just enough to keep them up to present condition, he just has the manure for the feed and labor, unless there be an advance in the market for his class of animals from the time he commences feeding till he sells. But if he gives a little more feed, say as much as the animal can digest to advantage, it adds to the animal in natural growth and accumulations of fat, and he not only has the advantage of any general rise in the market, but he enhances the market value of the animal by making it of a superior quality, and in this way gets paid, not only for what he has added to the weight of the animal, but realizes an advance upon the entire weight. Wm. H. Ladd. *Richmond, Ohio.*

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[For the Country Gentleman and Cultivator.]

COTTON SEED MEAL.

Messrs. Eds.—As I am now writing, I will give you my opinion, for the benefit of Inquirer, of Cotton-seed meal. Early last spring, I had two cows which were nearly dry—they both giving but three quarts a day. I commenced giving them three quarts apiece of the meal, mixed with cut meadow hay and straw, and they commenced to improve rapidly in flesh, soon having a coat as glossy and smooth as a well fed horse, and in three weeks time they gave between eight and nine quarts of milk per day, of very excellent quality. Now, considering the poorer quality of hay and straw that I am enabled to work up, I consider that cotton-seed meal and straw does not cost much more (if as much) than good English hay, besides keeping the cattle in much better order, and the manure is worth a third more.

This winter I have used over three tons of the meal. It costs at this place, one dollar and a half per hundred lbs. By its use I have been enabled to keep eight head of cows and a yearling, better than five cows were ever kept on the place before. I cut up all my hay, straw and stalks.

It made some of the old farmers stare last fall, to see me stocking up so much more heavily than common, some of them stating that I had not so much hay as would keep five cows, and that I must remember that if I had to buy hay it would cost pretty dearly before spring. But I had more confidence in the information that I derive from the

Country Gentleman than in these scarecrows which they set up. By feeding in this way, I have sold this winter two hundred dollars worth of milk. By not selling milk, I could have kept the same number of cows with half the amount of meal. Geo. D. Foristall. *Holliston, Mass.*

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[For the Country Gentleman and Cultivator.]

Cattle Nibbling their Mangers.

Messrs. Editors—"A Subscriber," in the Co. Gent. of March 8, inquires "the cause of cattle nibbling the manger and other boards within their reach, while tied in the stable." Doubtless he is right in his conjecture that it is caused by "a lack of something in the soil, thereby rendering the hay deficient of something that is necessary to the health of the animal." Probably the hay is deficient in the "bone-forming materials," that is, phosphoric acid and lime. This is the case in some of the older settled sections of New-England, where the pastures have been long grazed, and the fields long mown, without having been top-dressed or otherwise manured. The soils of these old pastures and fields have become so exhausted of the phosphates, that the grasses do not yield to the cows enough of them to supply the daily waste going on in the bones and other parts of the system, and at the same time supply the large demand for phosphates made by the milk secreting organs, or in furnishing the materials for building up the osseous frame-work of the embryo calf before its birth. Every 40 gallons of milk contain one pound of bone earth, besides other phosphates. The milk of a good cow in a year, contains, of earthy phosphate, as much as is present in 30 lbs. of bone-dust. The milk, and the annual calf, if sold off the farm, and the wasted urine (allowing only one-third of this to run to waste,) of a good cow, annually removes from the soil as much of earthy phosphates as is contained in 56 lbs. of bone-dust. Now it is not surprising, that the grasses of some pastures and fields, that have been grazed and mown for 80 or more years, are deficient in the necessary phosphates, the bone-forming materials of animal food. Cows and young cattle, thus poorly fed upon these innutritive grasses, whether in their green or dried state, instinctively turn to the proper remedy, and neglect no opportunity to gnaw upon any old bones they may be able to find. In the absence of these, they seek out old boots, shoes, or other leather, or "nibble their manger and other boards within their reach." Says Prof. Johnson of Yale—"The results of continued feeding on such poor pastures, are a loss of health on the part of the cows, especially manifested in a weakening or softening of the bones—the *bone disease*, that is not now uncommon in our older dairy districts."

The disease can be partially remedied by directly feeding finely ground bone meal to the animals, mixed with salt or provender of some kind. Two or three gills weekly will answer. Within the past ten years, I have procured many barrels of fine bone-dust, such as is made at the button-mold factory at Brighton, near Boston. Besides, some of our traders keep it for sale as a "medicine for bone-sick cows."

Some persons who write for the agricultural papers, say this story about a lack of phosphates in the soil, bone disease, &c., is all a chimera—an idle fancy.

Cows and young cattle grazed in newly cleared pastures and the clover fields of Western New-York, and fed in winter on roots, grain, and good English hay, are not troubled with the bone disease. Roots, grain and English hay, can only be grown where the soil is *naturally rich*, or artificially made so by the application of manure. In either case the soil contains all the necessary constituents of plants, and as a sequence, the crops contain all the necessary elements (including the phosphates) for the healthy growth and sustenance of the cattle.

But the condition of the soil and crops are quite different from the above, in those districts where the bone disease of cattle prevails. These old pastures and fields year after year only produce a light crop of poor, innutritive grass, known as the "wild oat grass, white top," &c. It is the Danthonia spicata of the botanist. It will grow in these old pastures and fields, where none of the better varieties are found. It is fast gaining foothold over large tracts of pastures and fields in nearly all the older and long settled portions of the hilly, rocky portions of New-England. And where the stock is kept summer and winter on this grass, the cattle generally have a hankering after bones. If cattle back in the interior do not find soda (salt) enough in their food, (and they seldom do,) the farmer usually feeds it to them. If he neglects this, they will let him know their wants, if there is an old meat or fish barrel comes within the reach of their tongues. A certain amount of iron is necessary for the healthy condition of the blood. Sometimes the assimilating vessels do not take up enough from the food for this healthy condition, and weakness follows. Upon application to the physician, he at once understands the "cause and the remedy." He at once administers some preparation of iron as a medicine. This restores the patient to health and strength. So in the case of bone disease. Ground bone is the remedy. But it would, if practicable, be a better way to supply the soil with the necessary phosphates, as has been extensively done upon the long grazed portions of Cheshire, Eng.

If "A Subscriber," will place within reach of his cattle horn-piths, or other large bones, and they are eager for eating them, as is the case with the cattle here on many of our old farms, he may be pretty sure that there is a deficiency of phosphates in his hay. If he is not in the habit of giving his cattle salt, it is possible that the "nibbling" may in part be due to that. Please try both, and report the result through the columns of the Country Gentleman. "Do good and communicate."

Warner, N. H., March, 1860. L. Bartlett.

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[For the Country Gentleman and Cultivator.]

CHEAP DRAINING.

Messrs. Editors—Having noticed an article in the August number of the Cultivator 1859, on subsoiling and ditching plows, I had some ditching to do, but had no ditching plow, and being a small farmer, and not able to get all the new and improved tools, I resolved to try it with a common plow. I commenced by plowing three furrows (all from one way,) about ten inches wide. These were pulled out with a dung hook. I then went up one side and down the other with the plow, thereby loosening about six inches of the subsoil, which was then shoveled out. The plow was then passed up and down again, and the loose dirt shoveled out as before; then plowed again, keeping one horse in the ditch until it got so deep that the whippletrees rubbed on the edge of the ditch so that the plow could not go to a sufficient depth. I then plowed with one horse putting him in the ditch, using a short whippletree that would not rub on the sides of the ditch, thus plowing and shoveling out the loose dirt until I got the ditch from three feet to three and a half deep. I then put in stones, putting a row on each side of the ditch, leaving an open passage in the middle, from three to four inches square, covering it over with larger ones. I then put in small stones until the ditch was nearly half full. I then put some straw on the stones, and plowed the dirt in again with two horses, putting them both on one side of the ditch, and as near it as possible, so that the dirt would fall in on the straw, and when the straw was covered, I put one horse in the ditch, and as the earth was all thrown out on one side of the ditch I passed the plow along in the ditch, thereby smoothing and settling the earth down when going one way, and filling in while going the other way, until the ditch was about full. I then turned a furrow on the ditch, from each side, thereby ridging it up higher than the ground around it by turning five or six furrows toward the ditch on each side.

I believe there are many farmers who think as I did, that none but experienced ditchers could dig a ditch. By doing it when the ground is neither too wet nor too dry, any common farm hands with a common farm team may ditch as easily as to do common farm work. I have no doubt but that tile is better and more durable for underdrains than stones, but in my neighborhood stones are the plentiest and cheapest. I have known drains made with stones last twenty years. If the drain that I have made should get stopped up in twenty or thirty years, I have no doubt but that there will be stones enough to make another one. A **Small Farmer.** *Glenville, N. Y.*

CULTURE OF BROOM-CORN.

Messrs. L. Tucker & Son—Will you be so kind as to give me some information through your excellent paper as to the culture of broom-corn—when and how to plant, gather, &c., also how much seed is required to plant per acre. It is entirely a new crop to me, and any information you can give concerning it will be thankfully received. Is it considered a paying crop, and what is the average product per acre? J. **Wm. Danner.**

Highland Home, Va.

We can give some general information on the subject, but many particulars required for its successful culture can be only learned by experience. As it requires better soil and more skill than ordinary crops of common corn, it also pays better under proper management. Broom-corn will yield from 500 to 800 lbs. of the brush per acre, which if prepared in the best manner, will sell for a hundred dollars or more a ton—it has in some instances brought two hundred.

The land should be rich—it cannot well be too rich. Alluvial flats are especially adapted to its culture, as they are warm, fertile, even, and free from stone. The land should be well plowed, and if after a previous crop, with a deep running plow to turn under the stalks. The soil should be harrowed and rolled, to have a smooth surface. It may then be neatly and accurately marked out with a marker, in rows a little more than three feet apart. A drill follows these marks and deposits the seed. A greater crop may be raised by planting in drills, but unless the land is previously quite free from the seeds of weeds, it will be attended with too much hand labor, and hills will be better. The quantity of seed required is about one peck per acre, but many plant more, and thin out the surplus plants. The ground should be kept well cultivated—if previously clean, it will need no hand hoeing—especially if the proper kind of cultivators are employed to throw the earth against the stalks as soon as they are stout enough for the operation.

Two periods are selected for harvesting—the first, as soon as the brush is formed, while it is yet green, which furnishes the best material, but no seed; and the second, while the seed is in the dough state. If left any later, the brush will be too brittle for value. The stalks are bent down, by laying those of two rows across each other obliquely, so as to form a kind of table of two rows, with a passage between each table. Six or eight inches below the brush the stalk is cut off in harvesting, and carried in, and the drying completed on poles spread one or two inches thick. Such of our readers as are successful cultivators of this crop, may be able to furnish valuable details of the various parts of the operation, or improvements on this mode of management, in which case we should be glad to hear from them.

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A Cheap Paint.—Make a thin paste of wheat or rye flour—strain it, add sufficient venetian red or ochre to make a thick paint—put on one or two coats. Dissolve one pound of glue in three gallons of water—mix in your paint, and put on for the last coat. It will look as well as oil paint.

For Cheap Oil Cloth, Ochre, mixed with paste, makes a good foundation; it fills up the cloth and makes it better to paint upon.

[For the Country Gentleman and Cultivator.]

VENEERED HOUSES.

Eds. Co. Gent.—I notice that many of your correspondents are very grateful to Mr. Woodward for his articles on Balloon houses. I shall in this article try to tell you how they *veneer* those same balloon frame houses in this city and county, which gives them the appearance of solid brick houses, and in many respects far superior, "cost about the same, or nearly so."

It is done as follows: house built as all balloon frames—lined with one inch boards on outside—the foundation wall must extend far enough beyond the sills for the brick to rest on, the brick all laid up in good mortar, so as to present a face of 2 by 8 inches; and when the wall is laid up five brick high, drive a 5 inch spike into each studding; let the head of spike be held close to the brick, that it may in driving, scrape itself into the brick, thereby holding it firm and tight. Spike every tier of 5 brick, until finished. Studding here are generally 15 inches apart; it will therefore take 1 spike for every five brick high, and 15 inches long; 7¼ brick lay up one square foot.

Old frame buildings with weather boarding on can be veneered the same way, and if not plumb can fill space between boards and brick with mortar, to keep out rats and mice. In an old frame house you will have to make the foundation wall wider, that the brick may have a resting place.

The advantages claimed over a brick house are that they are much safer in a storm, and always dry and no dampness whatever; and over a frame house they are much warmer, and do not need painting every few years, which is quite a saving; and lastly, will last at least one generation longer; and I may add to those coming from houses in cities, that to veneer them with brick saves quite a nice percentage in insurance against fire.

If you think this manner of veneering balloon houses will be news to many of your readers, please give it to them. **W. S. Hand.** *Milwaukee.*

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[For the Cultivator and Country Gentleman.]

Remedy for Cracked Hoofs.

Messrs. L. Tucker & Son—Please allow me to give my experience in reply to an inquiry by J. C., on the treatment of a cracked or split hoof in a horse. It has been my misfortune to own such a one, and to discover a most infallible cure; and from the construction of the horse's hoof, I think that any rational mind, however inexperienced, cannot fail to coincide with me. If not, let them try the experiment as I did, and then deny it if they can. I am no veterinary surgeon, nor did I ever employ one more than three or four times in my life; yet I use the horse in as many shapes as any other one person of our neighborhood. Fast and slow, heavy and light, old and young, are all inhabitants of my stable at once, and I am content with the number that have so far proven "out of fix." My theory and practice is, to study as nearly as I can the nature of that with which I am dealing, and treat it accordingly to the best of my knowledge, be it horse, fowl, soil, or what-not.

But to the subject—my cure for which is: Simply make an incision at the extreme top of the horny substance, cross-wise of the crack, and parallel with the horny hoof, some two inches each side of, (across and above) the crack. The old crack, if left to its way, will continue to grow up as fast as the hoof grows down—if not checked by a cross-cut. After this, with careful treatment till there is a new hoof formed, the horse will be as sound in that as any other foot he's got.

If J. C., or any one else, wishes to try this method, and takes care not to allow the old crack to tear its way upward after the new hoof forms, he will most assuredly effect a permanent cure, of which I would be happy to hear, as I know the troubles and trials of such cases to my entire satisfaction. **Frank Ruffner.** *Hamilton Co., O.*

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Whitewash your young apple trees with good fresh slacked lime before the buds start. It will scale off, and take the bark-louse with it.

BARLEY AND ITS CULTURE.

The culture of barley has been practiced, as far as is known, as long as that of any other grain, and it flourishes in widely diverse situations. Though evidently a native of warm climates, it will grow in very cold ones—maturing in favorable seasons as far north as 72°, and in the Himalayas at an elevation of from ten to thirteen thousand feet above the sea. In the high valleys of the Adirondacs, as mentioned by a writer in our State Transactions, luxuriant crops of barley flourish where Indian corn was never planted, the seasons being too short and subject to frequent frosts.

Barley suits itself to varied soils as well as climates, but the best barley is grown on warm, rich and mellow loams. In England the terms barley-land and wheat-land are the usual designation of light and heavy soils adapted especially to the growth of these grains. On clay lands the produce of barley is greater, but it is of a coarse quality and does not malt as well—on loams it is plump and full of meal, and on light calcareous soils, the crop is light, the grain thin in the skin, of a rich color, and well adapted to malting. These are the characteristics of English barley, where great attention is given to this grain, and very fine qualities produced, but they are also true of the differing product of the soils of this country. A soil that will grow tolerable rye, will produce inferior barley, and a heavy soil better suited to wheat, as already remarked, will do the same. Mucky soils will occasionally produce good barley—(we have seen some very heavy crops grown the next year after the surface muck had been burned over, thus giving the land a large dressing of ashes,) but they are far from sure for this crop. It may appear favorably until near heading, and then turn yellow and produce nothing, particularly if hot, dry weather occurs. In our experience, a deep gravelly soil in the best condition for giving vigorous vegetation—which will bear drouth and produce a full growth of straw—if favored by a properly moist and warm season, will produce a large crop of barley—from forty to sixty bushels per acre.

In a rotation, barley should not follow wheat or oats, nor should a second crop come in immediately after the first, without applying a liberal dressing of decomposed manure; and we think it the best course to seed to clover, which succeeds well when sown on barley and dressed with plaster. Pasturing or mowing this for two years, we may then manure for corn or roots, and afterwards re-crop with barley.

The preparation of the soil for barley as already noticed, should be thoroughly made, as a deep, mellow tilth is most favorable to productiveness, and barley suffers much from a foul state of the soil. In those sections where barley has been grown most extensively, it is largely the practice to sow barley after a hoed crop, when the earth is left light and free from weeds. After such crops—well manured and thoroughly cultivated, of course—a good yield generally follows, larger often than if the same manure had been applied directly to the barley. These corn stubbles are generally plowed in autumn, especially when of rather retentive soil, and care is usually taken to provide proper surface drainage at this time, that no stagnant water may remain upon them during the winter. A fall-plowed clover ley answers well for this purpose, but should be well worked in the spring. We would first harrow well lengthwise the furrow, and then work with the gang-plow or wheat cultivator before sowing—or, perhaps, the coulter harrow would be the best implement for the purpose. When green-sward is to be sown, the double plow gives the best prepared seed-bed. We have known good crops grown on sward turned under as deeply as possible with a large plow, and the seed then covered with a shallow set gang-plow—to be harrowed and rolled afterwards. If seeded to grass, the seed should be sown before rolling—the passage of this implement covering the ground sufficiently.

It should be borne in mind by those who would grow this grain, that thorough tillage, a deep, well pulverised soil—is very important. Maturing quickly, it requires good culture, that the soil may give it immediate and abundant supplies of nutrition throughout its growth.

As to the time of sowing, it should be about as early, as the season will allow of adequate preparation. The crop stands about three months on the ground, and it is important that it gets a fair start before the summer drouth comes on. Too great haste, in sowing, however, may prove injurious, especially if followed by cold, sour weather, unfavorable to the germination of the seed, for some weeks, as in that case the soil becomes so hardened as to hinder the success of the crop.

The amount of seed usually given to an acre, varies from two to three and four bushels—poor, early sown and mellow soils requiring least. If drilled in, a less quantity is required; and the practice of rolling when the young plants are a few inches in height, if the ground is dry and porous, has lately been practiced to a considerable extent, and is found serviceable in giving support to the roots, and in causing the plants to tiller and increasing their vigor. We question the utility of heavy seeding, if proper care is taken in selecting good seed and properly covering the same. The best seed barley is that of a lively color, free from blackness at the germ end, and with a thin skin. It is advisable to change for that grown at a distance, and on different soil, occasionally—as without attention to these cautions, barley often deteriorates, becoming coarser and lighter, with thick skin and little flour, from year to year.

In harvesting barley it is important to cut it at the right stage, when neither too green nor too ripe. If rather green, the grain shrinks, and is of light weight; if fully ripe, it shells easily, is liable to become discolored, and the straw is of less value. When the head begins to assume a reddish cast and drops down upon the straw, the proper period of harvesting has arrived—and as after this the grain ripens rapidly, it should at once be cared for. It may be mown or cradled, or cut with a reaper; if the straw is long it should be bound; if short, with proper forks it can be pitched at once from the swath, and stored without binding. Barley should be secured as soon as thoroughly dry, which will not be long in favorable weather.

Barley straw, well cured and not over ripe, is readily eaten by all kinds of neat stock, and is thought worth about the same per ton as corn-fodder or inferior hay. By elevating the straw-carrier above the lower sieves of the separator when threshing, the bearded chaff may be thrown aside, and thus it may be fed to sheep without the injury to the wool which otherwise occurs.

The diseases and insects attacking this crop are not numerous, but when they prevail, often destroy the profit of its culture. A kind of smut called the barley brand, which sometimes prevails in cold, wet seasons, proves a serious disease. It is a fungus parasite, having its seat in the ear, and developing a sort of woody tissue between the layers of the fungus. The outer covering of the grain remains sound, but the internal structure is blackened and destroyed. A species of smut, differing, we think, from that above described, was largely developed in some sections last season. Just before ripening the barley fields were black with smut heads, which in a few days fell to the ground, leaving the bare stalk in its place. There are also two or more species of barley fly, which pass their larva state in the straw, injuring largely the yield of grain, as they prevail to a greater or less extent. The wheat midge is sometimes found in the heads of grain, especially in situations near wheat fields, or where the midge was found the previous year.

Where the ravages of the above named enemies of the barley crop are slight or entirely unknown, (as they are, we believe, in many sections where it has been but recently introduced as a general farm crop,) the average yield and profit of barley compares favorably with that of other grains. As feed for stock, it ranks next to rye and Indian corn, and mixed with these grains and with oats, and ground, is excellent food for all kinds of stock.

[For the Country Gentleman and Cultivator.]

HOPS—PICKING AND CURING—II.

There are many varieties of the Humulus lupulus—some large, others smaller; some of red tinge, others of a greenish white color; some grow at irregular intervals, others in somewhat close clusters. The same sort is sometimes known by different names in different places. In some districts, the Mayfield grape, a white hop that sets in compact clusters, very similar to some varieties of the grape, and denominated simply the grape hop, is a favorite variety; but there are improved sorts that are considered superior to this even, it is reported. I should prefer, however, a good medium sized white hop, that grows in large clusters, both because those of this description yield well, and are more quickly and economically gathered—a very material consideration—when the time for that important operation comes round, just previous to the annual return of the "sere and yellow leaf," in the autumnal drapery of the majestic, beautiful forest trees.

Hop drying pre-supposes a drying kiln. In their best form kilns are costly. Having used and seen others use a cheap kiln, I will here briefly outline its form for the uninitiated, if such there be, who feel any interest in the subject. This can be available only to those who have a large barn or other floor on which to lay the heaps, as they are dried: Build a wall three feet high, 16 feet by 12. In the center of 12 feet square, in one end of this basement, build a solid block of masonry 6 by 6 feet, and 18 in. high. Now raise a light balloon frame, 16 by 12, and 16 feet high, on the basement wall; and put on this a roof of one-third pitch or grade. A small frame of 2 by 4 oak scantling is now laid on the central block, having an inside space of four feet by four. Oak studding are laid on this, and carried up—spreading, funnel-like—till they reach a perpendicular height of 8 or 9 feet in the clear. Here oak joist, 2 by 6, cross from the studding to studding of the frame. On top of these are laid strips of pine, or other wood that is not apt to warp much, 1¼ by 8 inches the deepest way downward, with 1½ inch spaces between them, making a "spaced" drying-floor 11.8 by 12 feet. The space of four feet on one side is floored five feet above the wall, and four below the top of the inclosing frame of the kiln. This floor is necessary to stand on in examining the hops when drying, taking them off, or putting on, &c., and is accessible from the outside by a step-ladder. A ventilator in center of the roof-ridge is indispensable. On the side in the basement where the four feet space is left, an opening 15 by 18 inches is left in the frame, the bottom of which is the block. The frame being lined with inch board previously, the opening and interior is lined with brick, set in well-tempered mortar; the brick being laid the thickest way for the first three feet, and then flat against the boards to the top. Now the kiln is complete; the space around the block in the basement serving to store charcoal in, and the object of the wall being that of security against fire. Two kilns are necessary to dry hops economically, and not more than one acre—good hops—must be attempted with only one kiln. The cost of such a building is, I think, about $40 in Wisconsin; and it is useful for many other purposes than drying hops, though I have not time to specify.

Hops are usually fit to pack between the 5th and 10th of Sept. If tagged—as the brown appearance given them by threshing and bruising by the wind when damp or wet, is called—they must be picked before fully ripe. They are ripe when the yellow powder about the seed is easily shaken out; when the seed is nearly black; when the hop itself is firm and somewhat stiff, and rattles like dry leaves in handling.

They are picked over frames, divided into compartments or boxes, the measure being known at so much per bushel or box. The vines are cut as the poles are pulled; but not before, as they wilt rapidly; and the less they are wilted before drying, the better will the sample be thereafter. An hour in a yard at picking time will give the whole details better that it could be explained in a whole column of this page. The hops are put from the boxes into large sacks, in which they are conveyed to the kiln; and the less they are crushed and broken by these processes, the better the dried product will appear.

There is a difference of opinion as to how thick they should be laid on the kiln. Six inches is, according to my experience, thick or deep enough, but it should not be much less than this, or a larger portion of charcoal will be consumed by the rapid passage of heat through them after they are about half dried. The fire must be small at first, and gradually increased until about the fourth hour, when the maximum heat is required. It requires eight hours—nine if they are wet—to dry a kiln of hops, and the last hour or upwards the heat is reduced; the water of the hops having been before this driven off or evaporated. Sulphur, in powder, is used by many about the third hour, to bleach the hops or give it a bright, whitish green tinge, and from its well known effects in bleaching straw bonnets, etc., we can generally anticipate some improvement in *color* from its moderate use; but it is not probable that the *quality* of the sample is improved by the application in this or any other way. The hops are often examined as they dry, especially when the fire is strongest, because scorching spoils them at once; this is known by a brown color and the smell of burning. To prevent this is indispensable, hence the watchful care required. As to whether it is best to turn the hops, when a little more than half, say two-thirds, dry, there is a difference of opinion, some contending that if the undried ones be put under, their escaping vapor is absorbed by the dryer hops above them. But I rather incline to turning, because it appears probable, 1st, that the moist hops must dry sooner when nearer the fire or head, and 2d, because the dry hops with which they are covered can scarcely absorb much moisture while they are on the kiln, and are themselves charged with heat sufficient to produce evaporation. When the hops are so dry that the core of three-fourths of them will readily break, and that of the remaining fourth being only a little greasy, *instead* of tough, to the touch, the hops are dried enough, and must be quickly taken off, unless the fire has become small, or nearly gone out, and the heat is much reduced, or the fire removed, as for instance on a Saturday night or later.

Hops are laid in heaps as thick as convenient; in a warm room is best; and allowed to sweat nine or ten days, when they are fit to be pressed, baled, and disposed of. Hop growers here, tell me that American hop-presses very much more expedite and economize the process of bagging or bailing, than the antiquated English system of treading into a deep sack or well-hole; and it is not to be wondered at that Americans have arranged the best method of performing such work, considering the superior mechanical skill exhibited in most of our industrial avocations.

J. W. Clarke.

Proper Time to Cut Grass for Hay.

The above is a question about which good practical farmers entertain quite opposite views; though they seem to agree in this, that the *value* of hay as food for farm stock depends very much upon the time or season of its growth when mown. But notwithstanding this apparent agreement, there is still a wide difference of opinion as to the time the grass possesses the most value for winter food for cattle, horses and sheep. Consequently, practice varies according as these different views are entertained. Some farmers cut their grass as soon as the bloom appears, or even earlier, and others at all subsequent stages until the seeds are ripe and the grasses are so dry that the product may be stored almost as soon as cut. "Such differences of practice must necessarily be followed by a wide variation in its value. That such variation actually exists is evidenced by the fact, that upon the same quantity of hay, and this made from the same grasses, the stock of one farmer will thrive and that of another will dwindle."

This contrast in the thrift of the cattle on adjoining farms, is frequently occasioned by the fact, that one farmer cuts his grass early, or mostly while in blossom, the other letting his grass crop stand till the seed had generally matured; this farmer contending that the seeds were the most important and nutritive portions of the hay, besides, he says it will "spend better." Cattle fed through our long winters upon this late cut hay, generally go to pasture real "spring poor."

Of late years, the attention of farmers has been more directly called to this important subject, through the agency of many of the State and County Agricultural Societies. The Secretaries of some of these Associations have caused large numbers of circulars to be distributed among the farmers, containing a series of interrogatories relating to practical matters pertaining to the farm, &c. Prominent among these questions, is the following: "At what stage of growth do you prefer to cut grass to make into English and into swale hay, and what is your reason for your preference?"

In 1856, Mr. Flint, Sec'y of the Mass. Board of Agriculture, issued circulars (containing the above quoted queries,) to practical farmers all over the State. "The replies from about one hundred and fifty towns are, that farmers prefer to cut the principal grasses, timothy and red top, when in full blossom; red clover when about half the heads are in blossom; and swale grass before it is ripe, and generally before blossoming, if possible, so as to prevent it from becoming hard and wiry."

"This practice is unquestionably founded on a correct principle, the object of the farmer being to secure his hay so as to make it most like grass in its perfect condition. The nutritive substances of grass are those, which are, for the most part, soluble in water, such as sugar, gluten, and other compounds. Now if this is so, it is evident that the grass should be cut at the time when it contains the largest amount of these principles. From its earliest growth the sugar and other soluble substances gradually increase till they reach their maximum per centage in the blossom, or when the seed is fully formed in the cell. From this period the saccharine matter constantly diminishes, and the woody fiber, perfectly insoluble in water and innutritious, increases till after the seeds have matured, when the plant begins to decay. Of course, if the plant is not cut in the flower, a great part of the nutriment of its stems and leaves is wasted."

The Secretary of the Maine Board of Agriculture issued circulars among the farmers of that State, propounding a series of questions upon practical matters connected with the farm. In the report of 1859, is found responses from many farmers, in reference to the proper time of cutting grass for hay. A large majority of them say that the English grasses should be cut while in blossom, and clover as soon as a portion of the heads have become of a brown color.

Says Mr. Sec'y Goodale, in this Report, "The principal point to be inquired into in order to decide the best period for cutting, is, when does grass contain the most nutriment? And to this, no definite and precise answer can be given, which will be alike correct in all cases, for reason that in different grasses this stage is not the same, being earlier in some than others; but for a general answer, both theory and the opinions derived from the experience of the great majority of intelligent and observing farmers, concur in the reply—"when in full blossom, or while the bloom is falling." At this period, most grasses have, so far as can be judged, obtained from the soil and from the atmosphere, the greatest amount which they will have at any stage of growth, which is of value as food for animals, and these exist at this period in the most valuable form. The changes which take place subsequently are chiefly within the plant; a part of the starch, sugar, gum, albumen, &c., soon go to assist in the formation of seed, and a part to constitute woody fibre, which is indigestible and worthless; and so much as is thus converted, is actual loss. Of hay cut at a later stage, cattle will doubtless eat less, and some infer from this, that it will "spend better;" but the true reason why they eat less is, because the system can digest and assimilate less. The actual benefit derived from hay is in proportion to the available nutriment contained in it."

As far as our observation extends, the prevalent opinion is, that more loss is sustained by late, than by too early cutting. That grass is sometimes mown too early, there is no doubt; but as a general rule, the farmer had better err on the safe side, and commence haying early, if he has a large amount to harvest, even if he suffers some loss by shrinkage of the first mown. It gives him a better chance to "make hay while the sun shines," for he has a longer period to secure his crop before it is "dead ripe," and sometimes saves hiring help, when labor is at its highest price, and scarce at that.

We have attended many auction sales of hay, and almost without exception, the early cut and well secured hay brought a higher price than that made from the same varieties of grasses, but not cut till the seeds had matured.

We think much might be gained by sowing in different fields, those varieties of grass seeds that mature at about the same time. The southern and western clovers usually ripen before red-top and timothy are sufficiently matured for mowing. Orchard grass, June grass, meadow fescue, and some other varieties of grasses, worthy of cultivation, are fit for the scythe about the time the above named clovers are, and a mixture of these would undoubtedly make a better quality of hay, than the clover alone. The fields of such grasses could be cleared of their crops before the northern clover, red-top and timothy would need cutting. These kinds, on well prepared lands, frequently yield large crops of excellent hay, if cut at the right period, and made mostly in the cock. Some farmers object to the culture of the northern or pea-vine variety of clover, on account of the size and coarseness of its stems; other farmers entertain different views—we would refer our readers to two notices of this variety of clover, at pages 17, and 75, present volume of the Co. Gent.

In our own experience with this variety of clover, when cut in blossom, and mostly made in the cock, we find our cattle to be fond of it, and they eat the entire stalks as clean as they do that of the finer grasses. There is another variety of coarse or large growing clover, that is highly recommended by some who have grown it somewhat extensively—it is the Swedish or Alsike clover. Like the northern, it makes a large growth; its blossoms are white, and its duration in the soil is much longer than the red clovers. For seed, the first crops of these should be saved. The aftermath or second crop does not, like the smaller varieties, produce seed worth saving.

Of the different methods of curing hay, we may have something to say in a future paper. L. B.

Roads—Their Construction and Abuses.

Whatever may be the progress of the railway interest, the train cannot stop at every man's door, and the great means of intercommunication must ever remain the common turnpiked highway. In their adaptation to this use and good condition at all times, all classes are interested —none more so, however, than the agricultural—and in the matter of business and convenience, they may be compared to the veins and arteries wherein the life-blood of the nation's commercial and social prosperity circulates and vivifies, from the Lakes to the Gulf—from the Atlantic to the Pacific. Let us offer a few hints for the benefit of those who have the official care of them in our goodly State; who are to enter upon their "honors" about these days, as by statute provided.

In laying out our roads, the mathematical axiom that "a straight line is the shortest distance between two points," has been too generally regarded, for, unless it is also a *level* line, the paradoxical proverb that "the longest way around is the shortest way home," comes practically nearer the truth. No unnecessary curves should be allowed, but a good road rather winds around hills than runs over them, and may often do this without increasing its length. And the load which a given power will draw on a level, will require nearly *four* times that power to draw it up a rise of one foot in a hundred. Hence it has been established as a rule in road-making, that the length of a road may be increased twenty times the height to be avoided, with true economy in the result.

Most of our roads, however, are already established, and little can be done at leveling or curving—but much may be accomplished in the way of draining, gravelling, and rendering permanent. The great difference between a good road and a bad one, usually lies in the fact of their perfect or imperfect drainage. It is as impossible for a good road to exist where water stands stagnant, and can only pass off by evaporation, as it is to raise good crops on the same kind of soil. A first-rate underdrain to carry off all surplus water, will be the most direct means of reducing these mortar beds or bottomless ruts to smoothness and solidity, and will do it in a wonderful short space of time.

In many cases, roads are wet and bad because the surface drainage is imperfect—the rains and melting snows making a ditch of the middle of the road. In such cases a ditch should be provided at the side, and if the soil is not naturally quite porous, the road-bed should be well turnpiked, so that the water may run off readily at each side. Good sluice-ways or culverts, should be provided in all places where necessary—a matter too often neglected, to the great detriment of the roads.

As to the material for road-making, it should be remembered that gravel and hard-pan, or gravelly loam, are the best, and the surface soil—often mere muck—the worst material that can be employed. Better leave a road unworked, than to form with any soil composed largely of vegetable mould, a narrow track, which will always become muddy and rutted in long rains, and impassable with heavy loads in the spring and fall. In many places no turnpike is needed; and when care is taken to keep the track clear of stone, and proper drains open, it will remain in a better state than if thrown up in the usual manner. Large stone, say above the size of a man's fist, should never be used in filling ruts in roads, however deep they may be, and they should not be more than half this size if placed near the surface. They are very sure to work up when the ground is softened by thawing up in spring. Let them first be broken finely, and they will become so fixed and consolidated by the travel over them, as to remain permanent. No loose or projecting stones should be allowed to remain in the roadway at any season.

One of the first things to be done in spring, and in many places it has already been attended to, is to pass over the roads with the leveling scraper, which smooths the surface, clears it of stone, and fills up the ruts and smaller hollows. These scrapers are in common use, but the most we have seen might be improved by having the tongue put in differently, so as to allow the scraper to pass diagonally along the road, instead of at right angle, which would better round up the road-bed, and correct the tendency to flatten down naturally prevailing. These should be used more frequently—as often at least as the roads become rutted and uneven—and where proper turnpikes have already been formed, but little other labor will be found necessary.

A hint may be useful on the manner of applying the labor assessed in many districts. It is not often of any great amount, or enough to effect any very extensive improvement in the highway, and hence is often frittered away in "here a little and there a little," begun and not finished, of slight advantage to the roads upon which it is applied. It would be the better way to employ the work assessed, in making permanent improvements—like draining, turnpiking, or gravelling a portion of the road thoroughly each year—which would in time, make the whole one of the best character.

One more topic we must touch upon and we have done. We have spoken of making and mending; now let us descant briefly upon the abuses of roads.

Until we see some man's pig a permanent tenant of his parlor, or his cow stabled in his kitchen, we must allow people generally to have some idea of appropriateness, and of the uses for which a thing is designed. But how strange must be his sense of the fitness of things, whose whole farm or manufactory disgorges itself on the public highway—making it the receptacle of all manner of useless lumber, and all sorts of business operations. It is his lumber, wood, and barn-yard; his pasture and pig-pen; he sets his barn or shop butt against it on one side, and his house perhaps a few feet removed on the other—lining the margin with all manner of farming tools and implements, with piles of stone and old rails to complete the scene.

As long as swine have the freedom of the road, it is difficult to keep it free from weeds, for these animals are sure to root up every decent spot of grass as soon as it is fairly established. We once saw, however, a road-ride for perhaps half a mile, as clear of rubbish and as smoothly and greenly swarded as the finest lawn or park which ever met our eyes, and though many years have since elapsed, we often recur to the scene. Would that its counterpart might frequently grace our highways.

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[For the Country Gentleman and Cultivator.]

THE PLEURO-PNEUMONIA.

The State Commissioners charged with the bloody-work of exterminating the cattle malady, imported into Massachusetts about a year since, held a meeting in North Brookfield on Wednesday, the 9th instant, appointed for meeting delegations from the various County Societies to consult as to the expediency, among other things, of holding cattle fairs the coming autumn. Commissioners Walker and Lathrop were present, and delegates from about half of the County Societies, comprising, also, members of the Board of Agriculture, with several prominent gentlemen, among whom was Mr. John A. Taintor of Hartford.

Several herds were examined and several animals were killed, all showing unmistakable development of the pleuro-pneumonia. A new case was reported in Sturbridge—the disease having been carried thither by a cow purchased in the infected district. One consolatory fact attends every case of pleuro-pneumonia thus far, which inspires the Commissioners with hope, to-wit, that not a case has occurred that is not directly traceable, either to Belmont, or the "infected district" of the Brookfields, rumors to the contrary notwithstanding.

It appears from a statement made, that this fatal epizoötic was first introduced into this country in 1847, by a farmer in New-Jersey, Mr. Thos. Richardson. He discovered it among his imported stock, and before other herds were exposed, knowing the malignant type of the disease, he immediately killed his whole stock, valued at $10,000, a most noble act. He lately wrote to a gentleman in North Brookfield, that the only way to get rid of the malady, is to kill every herd which has been exposed. Some of the farmers assert that the disease has been conveyed by moving the hay from a barn where the cattle were diseased.

More than 400 head of cattle have already been killed, and as many more, probably, stand upon the condemned list. The pleuro-pneumonia is the all-absorbing topic here, and no wonder, for the farms in this fine agricultural region are rapidly becoming herdless. Instead of the cattle upon the hills and the cows coming home at 5 P. M., to be milked as formerly, now may be seen the yawning graves soon to receive the bodies of the working oxen, spared until Saturday, the 12th inst., in order that the farmers may finish their work. The topic is one whose contemplation brings over the mind deep feelings of sadness.

On Wednesday evening a meeting was held in the Town Hall of North Brookfield, and the Rev. C. C. Sewell, of the Norfolk Co. Ag. Society was called to the Chair. Speeches were made by delegates from different parts of the commonwealth, in the approval of the work of the Commissioners. The entirely inadequate appropriation made by the Legislature, to be expended by the Commissioners in the extermination of the disease, has called for the raising of a guarantee fund, to enable them to proceed with their work, of not less than $60,000. The meeting adopted resolutions approving this, having no doubt that the next Legislature will make the necessary appropriation. Thus stands the record at present.

It is hoped that success will crown the laudable efforts making to exterminate one of the worst maladies that has ever befallen the cattle raisers of the "Old Commonwealth." Should it be suffered to spread over this country, as it has over Europe, no one can make any adequate estimation of the injury it would be to cattle breeders and graziers, unless it be such as have lived in Europe and witnessed its ravages there. Now is the time to study prevention and thorough eradication—a work that should be faithfully performed, though it should cost the killing of every herd in Worcester and Middlesex counties, where the disease has prevailed.

Strange and incredible as it may seem—both in view of present facts and the testimony of numerous veterinarians and others of England and Europe, Veterinarians, *so called*, have denied that the pleuro-pneumonia epizootic is contagious—this too, in view of the demonstrative fact, that not a solitary case of the disease has occurred without exposure, and hundreds have from exposure, as the history of the malady in Belmont and North Brookfield and vicinity do most incontrovertibly confirm and prove. Such stupidity would be incredible, but for the consideration that the race of quacks has not yet been quite exterminated by the genial reign of knowledge. Ignorance is a rebel; but, thanks to God, knowledge has the divine right to reign, and will in due time exercise the right to exterminate utterly all empirics and mountebanks, that have hitherto fattened upon the fruits of honest industry. Whom the gods would destroy of olden times they first made mad. Hence the folly and madness depicted may, after all, be a hopeful indication. GEORGE.

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[For the Country Gentleman and Cultivator.]

DRY AND BRITTLE HOOFS IN HORSES.

A reader of the *North British Agriculturist*, inquires what is considered to be the best remedy for brittle hoofs in horses, and what is the best application for encouraging the growth of the horn generally. In reply, the following advice is given, which we copy because it may be of service to some of our readers who may have trouble about this condition of a horse's foot, or find a horse occasionally lame without being able to account for it,—excessive dryness and brittleness of the hoof being, though little suspected, one of the many causes of lameness. "Keep the hoof moist when the horse is not employed. During the summer, a damp-bottomed meadow is the most suitable. During winter the feet may be stuffed with a proportion (mixture) of clay and cow dung, to which a portion of common salt may be added. To encourage the growth of the hoof, remove the hair by scissors at the top of the pastern, and rub in a little blistering ointment. This will induce a more vigorous growth of the hoof; but it will not wholly remedy the defect if it is constitutional, or if it arises from founder."

The above directions about keeping the hoof moist, are, probably, unexceptionable; but we have some doubts about the safety and expediency of cutting off the hair from above the hoof, and of rubbing in blistering ointment. First of all, the direction is too vague or indefinite, as no mention is made either of the amount to be rubbed in at a time, nor of how often it is to be done, nor of the mode of avoiding the unpleasant effects which may follow from applying blistering ointment, (more properly blistering plaster,) in the case of both man and horse. Were we pretty confident that the stimulation of the skin with Spanish flies or blistering plaster, would really produce some change in the growth of the hoof, we would prefer to apply the blistering material in a liquid and more manageable shape, as by steeping the flies in diluted alcohol or in strong vinegar. Any one disposed to try the efficacy of such an application should seek the assistance of a doctor or a druggist. But probably there will be very few who will wish to venture upon a trial, as we know of nothing calculated to create any confidence in the efficacy for such a purpose, of blistering flies in any form, except the fact that they are employed to some extent in the composition of "Hair Restoratives," and "Cures for Baldness." A.

REFUSE TAN, OR SPENT BARK.

This article can be had at almost every village without money, or for a mere trifle in the way of compensation. In some instances the tanner would be glad to have it taken away. The question has been asked by one whose teams returned, from an adjacent village, empty, a great times in a year, "Would it be worth the time of loading and unloading to stop at the tannery and get a load of spent bark, now and then?" Our answer was a pretty confident yes, and the following were the principal reasons alleged in support of it:

1. Among the various *uses* of refuse tan, none, perhaps, is so generally known as its power to absorb the urine or other liquids of stables or yards. A considerable amount of fertilizing matter may thus be saved by using tan as bedding for hogs, for cattle and cows, and for horses, or even perhaps in sheep-yards and under sheep-sheds. In the volumes of the Co. Gent. and Cultivator, 1858, Mr. G. W. Durant gives some account of his manner of using tan-bark as an absorbent, and as litter for various kinds of stock. He says that he has been in the habit of employing about one hundred loads in this way every year. In the beginning of summer, for example, he puts a load or two in his hog-yard, and when that is used up (thoroughly saturated,) he puts in more, making his yard so tight that no liquid can escape. All along until winter he endeavors to keep his hogs dry by filling in fresh tan-bark. He lets these yards be undisturbed until spring, when he carts out the manure thus made on his corn ground. "It has all the effect of pure hog manure, which is said to be the best manure we can get for that crop, and produces pumpkins in a wonderful manner."

The way in which Mr. D. uses tan-bark in his stables is as follows:—To a span of horses he puts in a load as bedding, or enough to cover the entire floor eight or ten inches deep. This is forked over every day for ten or twelve days, and then carted out and put in piles, or heaps, fresh bark being supplied in the stable. This method is pursued until hard, frosty weather prevents its being used as bedding, when straw is substituted. The manure or compost thus made, he applies to his carrot ground or garden. The urine of the horses has the effect to turn the bark black, and seems to rot it very quick. He mentions as an illustration of this effect, that a pile made in the spring could not be distinguished from clear muck when carted out for wheat in September. Mr. D.'s mode of using the bark for stabling cattle, is nearly the same as with horses. He covers the floor about six inches deep with the bark, which, he remarks, makes a nice, clean, soft bed for them, and has the stable cleared every morning of all that gets wet, and the remainder leveled off. This method of bedding cows and cattle is employed except when frosty weather prevents. Mr. D. also fills up his cattle-yard occasionally in the fall and during the winter, with bark sufficient to keep them dry; and so also during the summer, he spreads a few loads sufficient to keep the cows that are yarded over nights, dry and clean. The compost or manure thus made is occasionally forked over, and then carted out in September for wheat.

Probably the chief reason why spent bark is so little valued is on account of the slowness of its decomposition. The foregoing mode of employing it indicates one way in which this objection may be obviated, or by which the decomposition of bark may be accelerated.

2. But even in its undecomposed state bark may be employed with advantage to some soils—chiefly to tenacious cold clays. Applied to these it acts mechanically, and must serve to make them somewhat more friable. For such soils tan might even be of more advantage than manure, in many cases acting mechanically to loosen and lighten up the soil while it remains undecomposed, and at the same time giving out some fertilizing elements during its slow decomposition. In order to secure the fertilizing qualities of the spent bark more speedily, some tanners, we have been informed, burn it and apply the ashes to the land. The method employed by Mr. Durant is, however, far more economical, as a rich compost is thereby secured.

As some have a fear that tan in its undecomposed state would be likely to prove injurious to land, perhaps the best way of using it, even for clay soils, would be to have it, at least, partially decomposed, either by urine or the liquids of a yard, or by mixture with lime or ashes. Either partially or wholly decomposed it will make heavy soils lighter, and tenacious soils more friable.

3. Spent tan is certainly *useful* as a *mulch* in almost all cases in which mulching is expedient.

4. Spent tan is useful as a direct *fertilizer*. It contains several earthy and saline ingredients useful and necessary in the growth of plants.

5. It is stated in the *Farmers' and Planters' Encyclopedia*, that refuse tan is useful occasionally as a top-dressing on some grass lands, in a half putrified or even fresh state. *

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[For the Cultivator and Country Gentleman.]

SUGAR MAKING.

Eds. Co. Gent.—The sugar crop in Vermont is becoming an item of considerable importance; in fact it is one of the farmer's staple products. The sugar maple abounds here in almost unlimited numbers, and ever stands ready to yield up its sweet stores to add to the farmer's profits. There is no sweet that has such a delicious taste as that made from the maple, when it is made so pure and nice as to be almost without color. There are but few sugar makers, that make *real genuine* sugar. This may be owing partly to carelessness in saving the sap, by allowing leaves and other impurities to go into the pan; but we believe the main fault is in boiling. It has been found by experience and by experiments carefully conducted, by committees appointed by the "Farmer's Club" in this place, that the sooner the sap is converted into sugar after it runs from the tree, the purer and better the quality of sugar. The sheet-iron pan is at present almost universally used. This is a very great improvement on the old fashioned way of boiling in cast-iron kettles; it not only boils faster, but makes a better quality of sugar than could be made in the old way.

When the sugar pan was substituted for the old kettles, people were satisfied and never thought of having anything better; but in sugar-making, as well as all other things, there has been improvements.

The recent invention of "Cook's Sugar Evaporator," is as much of an improvement over the common pan as the pan is over the old cauldron kettles hung up in the woods by a chain. I have used one, and can cheerfully recommend it to all sugar-makers, and especially those that are about fitting up new sugar works. Every one knows the importance of starting right in any kind of business, and those contemplating building new sugar works, or repairing old ones will find it to their advantage to examine Cook's new method for boiling sugar. The plan has decided and important advantages over the present system.

1st. More sugar can be boiled with the same amount of wood than in the old way.

2d. It boils faster, and consequently is a saving of time.

3d. The sugar is of a much better quality than can be made in any other way.

Mr. Cook's evaporators are made of galvanized iron or copper; the copper ones are said to be the best.

The one I have is a No. 3, made of galvanized iron; is about eight feet long and four feet wide, and is fitted to a furnace that is made for the pan. There are fourteen flanges raised on the bottom of the pan which are one and a half inch deep, and about four inches shorter than the width of the pan. These flanges make fifteen channels crossways of the pan, and are left open at every alternate end for the free passage of the sap. A tub of sap is placed at the forward corner with a faucet, so as to run into the first channel, which begins to boil, with a good fire, in the third channel, and continues to boil, growing sweeter and sweeter until it reaches the opposite end and opposite corner of the pan, where it runs out in the form of good syrup into a tub or pail, and is ready for "sugaring off." I did not get my pan in season for the first run of sap, or not until after the 20th of March; but I must say that all the sap boiled in this pan made most excellent sugar; in fact, some made after the 5th of April is fully equal to any I ever made in the common way from the first run of sap.

Mr. Cook's Evaporator comes highly recommended from persons in high standing, for boiling the juice of the sugar cane. It is said that sugar of fine quality is obtained from the juice of the Sorghum, when boiled in this pan.

Our best sugar makers have found that the secret for making the best quality of sugar, is mainly in boiling the sap as soon as possible after it runs from the tree, and have practiced syruping down several times a day.

By using the Evaporator you never boil the same sap more than half an hour, as in that time it will be converted into syrup; the sap is running into one end and at the same time you have a small stream of syrup at the opposite end. GEO. CAMPBELL.

West Westminster, Vt., April 20.

SAND CRACKS IN HORSES' FEET.

As a cure for sand cracks in horses' feet, I will tell you what cured a horse I owned for a year after he recovered, and had perfect feet—although I have seen blood ooze from both fore feet when he moved. Take a wide chisel, 1¼ inches is best, place it at right angles with a crack just above the hoof, and strike it a smart blow with a mallet or hammer. If the crack is a bad one, draw it together with screws put in diagonally between the shoe and top of hoof—keep the shoe on, the hoof damp, so as to make it grow, and give the horse rest for a few days, and you will see the crack grow out as the hoof forms above it. If the chisel was driven to the bottom of the crack, which is generally not over half an inch, the horse must not be driven hard or trotted fast for at least three weeks. After I sold the horse I spoke of, he was taken to New-York and put in livery. I saw him a year afterwards, and his feet were sound yet. JAMES THOMPSON.

Rose Hill, near Ballston Spa, N. Y.

[For the Country Gentleman and Cultivator.]

CLAY AS A FERTILISER.

MESSRS. EDITORS—In Co. GENT., March 29, I find an article over the signature of J. G. C. He says, page 203—"but if, as in this case, the surface is loam and the subsoil pure cold clay, it is ruinous." It 1843 or '44, one of my neighbors wanted to get clay from my land for the manufacture of brick. Willing to accommodate, but not desirous to have a large surface dug over, I requested him to dig as deep as the clay was good. He dug so deep that they used a ladder to get out of the pit, and threw the clay on a staging, and then out—*pure cold sour blue clay.* The clay was drawn a few rods, and there left, and when more convenient it was drawn about one-fourth of a mile and manufactured. There was two or three feet depth of clay left, it never having been removed from the first place drawn to. A year or two after, I plowed up this field—it still is rather low and moist, and plowed through this mound of clay, and planted the field to potatoes. Where the clay had been deposited it plowed up very mellow, and on that spot I had the best potatoes. I then sowed the lot to rye, and on the clay mound the rye was very heavy—as much again as on any other part of the lot. Ever since the lot has been in pasture, and on the clay mound the grass can be distinguished a number of rods up to this date as decidedly more luxuriant, and the cattle gnaw it more closely as if sweeter. Such are the simple facts. How can the above extract be reconciled with this statement? STEPHEN BULLOCK.

Columbia X Roads.

RAISING EVERGREENS FROM SEED.

MESSRS. EDITORS—Can any of the numerous readers of the COUNTRY GENTLEMAN, tell how to make evergreen seed grow—such as pine, cedar, arborvitæ, spruce, fir, &c.? Some say it will take them eighteen months or two years to come up. Now I want to plant some the present spring. An answer soon to the above query, would be thankfully received. D. M.

Plant the seed in fine rich mould, covering them by sifting fine earth or mould over them, to a depth of a fourth to half an inch—keep the soil constantly moist by shading, and if the seed are good and fresh, they will come up in a few days. The depth of planting must vary with the size of the seed. The young plants will need constant shading, at least the first season.

PRODUCT OF A NATIVE COW.

Among the premiums offered by the Essex (Mass.) Ag. Society in 1859, was one of ten dollars for the best milch cow of native breed, who should yield the largest amount of milk, a correct statement being given to the committee of the weight and measure of her milk; but no animal possessed those qualities which, in the opinion of the committee, entitled her to receive the first premium. To the native cow "Daisy," owned by David Merritt, Jr., of Salem, a second premium was awarded. "Daisy" was four years old in April, before being exhibited in September, and dropped her second and last calf August 3d. From May 20th, 1859, to September 29th, her feed was nothing but fair pasturage, except a little of the first crop of English hay night and morning. From Mr. Merritt's statement, as published in the Trans. of Essex Ag. Society of 1859, we learn that her milk was measured morning and evening from the 15th of August to the 27th of September, and it was also weighed. The average daily yield during this period was 29¼ pounds, or 14 4-5th quarts. For the first ten days in September the average of milk was 32¼ pounds per day.

This cow came from a favorite cow, and was raised by E S. Parker, of Groveland, Mass. She dropped her first calf December 21st, 1657, at the age of two years and eight months In his account Mr. Merritt further says: "I bought her January 12, 1858, and between then and the 13th of January, 1859, she gave 2615 quarts of milk, beer measure, or 7027 lbs., at 2 lbs. 11 oz. per quart, or 9 quarts, 1 pint and 1 gill per day, wine measure, or 19¼ lbs. per day for the year." He estimates the cost of keeping her for the year to be $71.46. L.

CHEAP FENCES.

MESSRS. EDITORS—Your readers will find the following a cheap fence. It has the advantage of taking up but little room, as the rails are laid nearly straight. It is made as follows: Take your rails and place stones near where the rails lap—then drive two stakes, five feet long, one on each side, and lay up your rails until the third one—then take wire and fasten the stakes together—then lay up your rails to the desired height, and fasten wire across the top of the stakes close to the upper rails, and your fence is complete, making a large saving of land.

Crotches 3 feet long, sharpened and driven in the ground, then staked and ridered, make a quick cheap fence, suitable to keep cattle, &c., out of growing sprouts, &c.

North Chester, N. J. J. T. HOWELL.

ABOUT PLASTER.

Messrs. Editors—"Lock the barn after the horse is stolen," is a trite saying—so asking counsel after the deed is done, may exhibit about the same forethought. I have ten acres of meadow—soil neither wet nor dry, but about medium—that was seeded about three years ago, to timothy and clover, but the last two hard winters (hard for meadows) have entirely killed out the clover. Now, had I better sow plaster on this meadow? or, as I have already done it, have I done right? In other words, is it advisable to use plaster on timothy—will it pay? Clover, undoubtedly, is greatly benefitted by it, but I am not so certain about other grasses. I should like also to know the best time for sowing plaster—whether quite early, or will it do to sow it the fore part of May, or later? Further, would plaster benefit barley and wheat enough to pay the expense, at $4.50 per ton?

Being of an inquiring turn of mind, allow me to ask a a question or two more and I have done. In what way does plaster benefit a crop, when applied? Is it an active fertilizer, or does it attract and retain nourishment from the atmosphere or the soil?

I have been led to these last questions, from some queer statements made in regard to its application. For instance, one individual says he has used it in his garden, upon cucumbers, melons, squashes and vegetables generally, with decided advantage, but that it is just as well to put it into a tin cup, or dish of any kind, and place it near the plant as to sprinkle it upon the ground around the plant—the benefit being as great in one case as the other; this he *knows*, for he has tried the experiment. Of course, if he *knows*, that ends the matter—nothing more need be said. His reasoning upon the subject is about as clear as mud—I shall not attempt to give it.

I believe there are many opinions as to the effect of plaster, or how it operates as a fertilizer, as well as to the application of other manures. I think the best way is for every one to make and apply all the manure he can, in some form or other, and the man who keeps his eyes open, and observes as he goes along, will be likely to learn about as much from experience as from the multitude of theories advanced. J. L. R. *Jefferson Co., N. Y*

When timothy and clover are sown together, the latter being mostly (not always) a biennial plant, usually gives place to the former about the third year, unless special pains are taken to re-seed the clover. Plaster is usually very useful to clover, but very little so to timothy or grain crops, and we would not recommend it for them. We prefer, as a general rule, to sow quite early in spring, but we have known striking results in some instances, when sown after the clover was six inches high.

Intelligent chemists now favor the opinion that plaster proves beneficial by forming a constituent part of the plant. Hence early sowing facilitates its early solution by rains and its descent among the roots. There are, however, theories enough beside for our correspondent to choose such as he likes best. As specimens we condense a few, as given by a German chemical writer, as follows: According to Kollner, the lime forms useful compounds with the oxygen and carbonic acid of the air; according to Ruckert, it acts merely as food; according to Mayer, it improves the texture of the soil; according to Riel, it is an essential constituent of the plant; Hedwig called it the gastric juice of the plant; Girtaner, and others, regarded it as a stimulant; Chaptot supposed that it was useful by absorbing water. According to Laubender, it merely excites without mixing with the sap; according to Liebig, it absorbs ammonia; according to Sprengel, it supplies sulphur; others have thought that it promoted fermentation in the soil. We hope our correspondent will not understand that we propose to endorse all these views—some of them, on the contrary, have been proved erroneous by direct experiment—but in citing so many, we merely aim to show how doctors disagree.

[For the Country Gentleman and Cultivator.]

HOW TO DESTROY WHITE GRUBS.

Messrs. Editors—A correspondent, some time last fall, writes you that the white grubs destroyed his nursery, and asked for a remedy. As I have not seen an answer, I will give him some of my experience with them.

In the spring of 1846, a field came into my possession which had been infested with the large white grub for 15 years, to my certain knowledge, to such an extent that they would destroy every hoed crop, and most of the grass or grain. I built a barn near the field, and stocked it with fifteen common hens. When I commenced plowing in the spring, with a little grain I trolled them into the field, and they quickly learned to follow the furrow, greedily swallowing all the grubs in sight. The field was planted to corn.

When I stopped working the land, they commenced scratching, and every time the corn was hoed and hilled the hens would level the ground again. Indeed they dug closely to the roots of the corn, often laying them bare to such an extent that I was fearful they would destroy the crop; but it was far otherwise; the crop was a good one, and not a single stalk missing, where there had not been any corn raised for fifteen years, although several times tried. The worms were entirely exterminated that year, and there have never been any seen in the field since.

Now if your correspondent is a practical man, which he no doubt is, he will know how to adopt these hints to his particular circumstances, without any advice from me, if he should think it worth a trial. J. A.

Beekmantown, N. Y.

[For the Country Gentleman and Cultivator.]

CATERPILLARS ON FRUIT TREES.

Messrs. Editors—There is an old adage which says that "an ounce of preventive is worth a pound of cure." Allow me to advise your fruit growing readers to apply this wise saying to their fruit trees at once, and destroy the embryo "apple tree caterpillars" that infest them. To some this advice will not need to be given, to others it is very important, for an hour spent now in destroying this caterpillar's eggs and freshly hatched young, will save days a few weeks hence, when they have spread forth their tents to our view and great disgust. At the present date, April 20th, to 30th, the eggs of this moth—the "American Lacky Moth," are commencing to hatch, and a little practice in close observation of our trees will enable any one to easily find and destroy them. For the benefit of those that are not acquainted with their appearance I will describe them. And perhaps the words of Dr, Fitch, our accomplished State Entomologist, are more appropriate and accurate than any I can give. He says:—"The eggs from which these caterpillars come are placed near the ends of the twigs, in clusters, forming a ring, or rather a broad, thick belt, surrounding the branch entirely or in part. In these belts I have counted from 300 to 330 eggs. They are about three-fourths of an inch in length, and a tenth of an inch thick. The eggs are covered over with a thick coating of glutinous matter, which entirely hides them from view, and protects them from the weather."

This description being so clear will enable any one to discover these eggs, and now is the time for active work. Many are already hatched, and the young worms will be found usually toward the end of the same twig upon which they were hatched but being minute will not be seen without careful examination—they should all be crushed and the unhatched eggs carried to a fire and burnt, for if merely scaled off and dropped upon the ground, they will hatch and find their way to the tree. With the most careful examination, some clusters will escape, but the work of destruction will be comparatively small afterwards. And before concluding again, allow me to give farther advice, namely—cherish the presence around your homes of that bird of beautiful plumage and sweet song, the American Oriole, or hanging bird; plant a few trees of the weeping elm, from whose slender branches he can swing his nest and rear his young, and allow no idle man or mischievous or wicked boy to frighten or destroy him or his wind-rocked home, for one of his services to man is to destroy this caterpillar just described. I do not know that he touches them at any other stage of their existence, but have frequently seen him drag its chrysalis from its cocoon and the bloody stain left behind to show the work it has done. Therefore, cherish the Oriole as a blessing and a friend. J. H. H.

Clark's Mills, Oneida Co., N. Y.

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[For the Country Gentleman and Cultivator.]

Roup in Fowls—Homœopathic Treatment, &c.

Of all diseases domestic fowls are subjected to, the one we most dread is the *roup, catarrh, or swelled head.* All fowls, and particularly pheasants, are liable to it, and it generally proves fatal. In most cases we should say, kill a roupy fowl at once, unless it is valuable, as the ri k of its contaminating the whole yard is great. At all events, when disease of any kind seizes an individual, it is safest to remove it from the others as soon as discovered, and put it by itself, or it may spread over the whole flock.

By some it is considered a catarrhal disease, similar to the influenza in human beings, producing a thickened state of the membrane lining the nostrils, mouth and tongue. It is supposed to originate in changes of weather and variations of temperature; and the malady becomes confirmed with running at the nostrils, swollen eyes, and other well known symptoms—they are termed roupy. The symptoms most prominent are difficult and noisy breathing, a sort of rattling in the throat. The head becomes feverish and much swollen, and the eyelids livid, with decay of sight and total blindness. There is considerable discharge at the nostrils of fœtid matter; at the commencement thin and limpid, but afterwards becoming thick, putrid and very offensive.

About ten days ago we discovered our Golden Pheasant to be ailing, moping about, feathers staring, and one eye partly closed, rendering it difficult for him to pick up his food. On a close examination, we found his head feverish and much swollen, one eye closed, some fœtid matter running from his nostrils, his tongue and the roof of his mouth coated with a yellow substance,—all sure indications of the presence of roup. Being a rare and costly bird, we were very anxious to save him if possible, as we had suffered by the loss of one of the same kind of bird two years ago. Noticing in the 5th number of the present volume of the Country Gentleman, an article on Homœpathic treatment of fowls for this disease, we commenced by bathing his head, around his eyes and nostrils, with sugar-of-lead-water—his head being hot and feverish; then administered four or five drops of belladonna, diluted with an equal amount of water. Before giving the belladonna, we caused the eyes and nostrils to be washed with the arnica lotion, wiping out the offensive matter collected there; then putting him in a warm cage. This treatment was repeated for three days. After the second operation we found evident improvement, the swelling of the head gradually decreasing, his eye open, and picking up his food. After the third operation, and fourth day, the effect of the medicine was so apparent, that we restored him to his old quarters, so far recovered that he is running about eating and drinking as freely as ever.

Springside, N. Y. C. N. Bement.

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[For the Country Gentleman and Cultivator.]

GOOD VARNISH.

Messrs. Editors—I send you *a recipe to make an excellent varnish,* in answer to the query of a "Subscriber," in No. 15, present vol. of "Co. Gent.," which we recommend particularly as applicable and beneficial to leather, such as boots, shoes, harness, &c., and will also answer a good purpose to hasten the finish of furniture made of wood, being perfectly dry in fifteen minutes after being applied. In the application of it, it will be necessary to prepare the article, whether of leather or wood, with a coating of oil; the former with former with fish oil, and with linseed for the latter:

Take 1 gallon of Alcohol.
1 pound of Gum Shellac.
6 ounces White Turpentine.
4 ounces Rosin.
2 ounces Oil of Lavender.
And when used for leather, 1 ounce of Lampblack

Put the ingredients all together in a clean crock, let it stand about two weeks well covered. Stir it once a day, and when fully dissolved, it will be fit for use. D. Shallenberger.

Pike Run, Pa.

[For the Country Gentleman and Cultivator.]

DRIVING BEES.

Messrs. Editors—In answer to the inquiry of "B. B. B.," in your issue of May 3d, relative to the proper time for driving bees, that if it must be done, the 21st or 22d day after the issue of the first swarm is the best time to secure the least possible waste. The reason why, is obvious, from the fact that no eggs will be deposited until another queen, as yet immature, matures, becomes impregnated and assumes maternal duties. By this time, the eggs last deposited by the old queen—excepting a few in drone cells—have hatched, become larvæ, passed through the various metamorphoses, and together with the pre-existing larvæ and sealed brood have come forth from the cells matured, leaving the combs nearly empty of brood. There is no other period, during the working season of bees, when the combs contain so little brood.

If bees are driven as soon as they commence working in the spring, there is much danger of their starving, unless liberally fed; and further, will be of but little or no profit to their keeper that season; for the reason, that in spring, they are comparatively few in numbers, and if they are obliged to build combs, requiring a large amount of honey, time and labor, a long time must necessarily elapse before the new progeny of the queen will be added to their numbers, during which their own scanty few are daily diminishing, so that the colony will be very much reduced by the time of the new recruits. Besides this, there will be much loss of valuable brood in the combs from which the colony is to be driven—to say nothing of the value of the combs themselves.

Having stated what was required by your correspondent, I would now caution him, as well as others who may be interested, against the ruinous practice of driving bees too frequently. If the combs have become mouldy or filled with diseased brood, it might be advisable to drive the bees into a clean empty hive, or what is better still, one filled with bright healthy combs. Do not by any means drive the bees if the combs are healthy and in good condition, even though they have been in use five or six years. Should any bee-keeper still persist in changing his bees as frequently as some, it would be far more economical to use Langstroth's movable frames, and *transfer* the best combs and those containing brood to the frames, which can be done at any season of the year. M. M. Baldridge. *Middleport, Niagara Co., N. Y.*

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RED ANTS.

Will any of your readers give through the columns of the Country Gentleman, a remedy which has been tried and found effectual, for the plague of small red ants, which infest our sugar and cake closets in July and August, and oblige

Middletown, Conn. A Distressed Housekeeper.

We have been told that by spreading ordinary *cotton-batting* upon the shelf, and placing the bowls of sugar or plates of cake upon it, the red ants may be prevented from getting into them—their legs not being adapted for use upon the loose and fibrous cotton.

This remedy has the advantage of cheapness and facility of trial, and we should like to learn the result if any of our readers put it to the test.

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[For the Country Gentleman and Cultivator.]

THE BEE-MOTH.

Messrs. Editors—The bee-moths are excessively annoying here, and as I know of no remedy but lifting the *gums* every morning, which is very troublesome, I would like very much to get a hive which would keep out these insects. There are a great many patent hives for sale here at the south; but they are generally so complicated, and so many have proven to be failures in respect to keeping out the moth, that I have no confidence. A have my bees hived in the hollow of a gum log, sawed off 2½ feet long. Common salt sprinkled under the bottom of these gums or hives keep the moths off in some measure. But still I find some every two or three mornings. N. A. C. *Tilton, Geo:*

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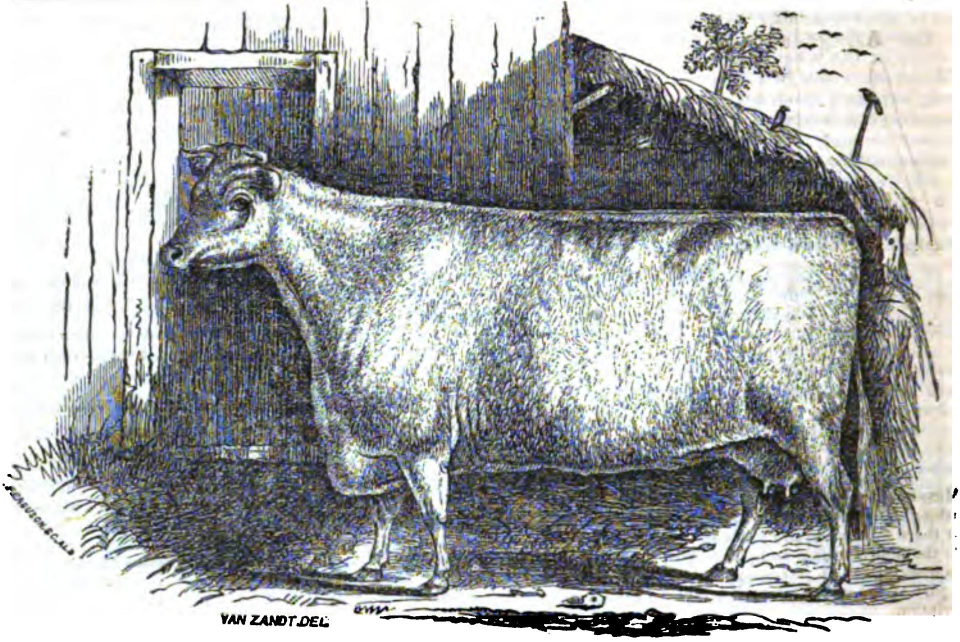
[For the Country Gentleman and Cultivator.]

CLAMS AND OYSTERS.

Four eggs—half a pint sweet milk or cream—twelve clams. Bake fifteen to twenty minutes.

Oysters—three eggs, half a pint cream—half pint oysters, and a little salt—bake. Y.



SHORT-HORN COW PERFECTION.

White—calved in 1852—bred by Mr. Hume of Kentucky—the property of Col. **Wm. H. Slingerland**, Norman's Kill, Albany Co., N. Y. Got by Rough and Ready, 929—dam Red Rose by Rhoderic Dhu, 2143. —— Young Pink, by Leonidas, 632. —— Kate, by Marshall Suwarrow, 692. —— Old Pink, by a son of imp. Tecumseh, (5049.)—— —— by imp. San Martin, (2599.) —— Mrs. Mott, [imp. by Col. Lewis Sanders of Grass Hills, Kentucky, in 1817, with "Tecumseh" and "San Martin,"] by Adam, (717.) —— Starling, by a son [by Favorite, (252,)] of Mr. Maynard's old Yellow Favorite Cow. —— Starling, by a son of Hubback, (319.) —— —— by Manfield, (404.) —— Young Strawberry, [bred by Mr. John Maynard and sold to Mr. Charles Colling in 1785,] by Dalton Duke, (188.) —— Old Favorite or Lady Maynard, [bred by Mr. Maynard,] by R. Alcock's Bull, (19.) —— —— by Jacob Smith's Bull, (608.) —— Strawberry, by Jolly's Bull, (387.)

Manuring or Top-Dressing Dairy Pastures.

It is pretty generally known, we presume, that bones have been found superior to any other manure for the purpose of improving grass lands generally, and pastures used for dairy purposes in particular. This is the result of *many* observations and experiments in *different* localities, of which, however, none are so generally known, or so conclusive as those made during the last thirty years in Yorkshire, Cheshire and Lancashire, England. It has been repeatedly stated in our agricultural publications—so often that it must have met the eye of almost every reader of these publications—that, in the neighborhood of the city of Chester there is a wide range of land which of late years has maintained 30 to 50 per cent. more stock than it did thirty years ago. Mention has also been made of one farm upon which, about ten or twelve years ago, bones were applied at the rate of 15 cwt. per acre, and upon a part of which, at the rate of 8 cwt, have been applied since. This farm now keeps, and has kept ever since the application of bones, more than double the stock it did previously.

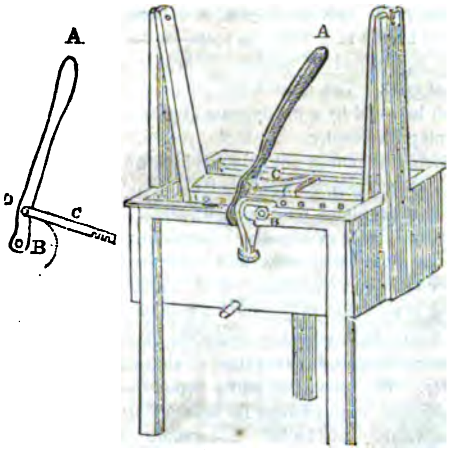
Such facts as these, and the generally acklowledged superiority of bones as a dressing for grass lands and dairy pastures, were vividly brought to memory by the reading of an inquiry and the reply thereto, which we quote below from the *North British Agriculturist*, published at Edinburgh. Taking for granted, very obviously, the superiority of bone manure, a reader of that paper inquires what *kind* or *form* of bone manure is best to apply to cow pasture as a top dressing, to which the editor replies as follows: "For *permanent* effect, apply bone-dust—sometimes sold under the term of bone-meal—made from bones or bone ash, or a mixture of both. Be certain that you obtain a genuine article, as it is frequently adulterated. For *immediate* effect we would suggest that you apply a superphosphate, or perhaps still better, a cheap phosphatic guano. These guanos usually contain a very considerable, and sometimes even a large percentage of phosphate of lime, and are sold at lower rates than either bone dust or superphosphate."

Beef Barrels for Pork Packing.

It is a popular notion that beef barrels are unfit for packing pork—that pork cannot be kept sweet in barrels formerly used for this purpose. H. Dodge, of Buffalo, N. Y., says, in an article on this subject in the Rural New-Yorker, that unless they have contained *spoiled brine*—which they are often allowed to do, through carelessness in not emptying them before hot weather—they will keep pork as well as new barrels, or those which have been used for pork only. He adds, that barrels in which brine has been left to putrefy, cannot be rendered fit for use again by any process; an assertion we take the liberty to doubt.

Last year a new barrel in which a quarter of beef had been packed, was left in the cellar after the meat was all consumed—and we believe a small quantity of veal was pickled in the brine, while it was yet sweet. This was used out, and the barrel left without emptying, until a bad smell became noticeable—it was traced to this pailful or two of brine, and was at once removed from the cellar. The barrel was washed and scalded several times, with but very little effect on the odor it had acquired; and we advised that it be buried about eighteen inches deep in loamy earth, and filled with the same, several inches above the extent of the brine, for several weeks. This was done, and the odor was removed; it was again washed, and has been used the past winter for packing beef with perfect success; and we have no doubt that pork might have been kept therein without injury from the barrel.

It is well known that fresh earth is a powerful deodorizer and disinfectant. In extreme cases it might be necessary to renew the filling several times, and a clayey loam would be better than that mostly sand, having stronger absorbent power. The best way, however, is to take care to empty all beef barrels while the brine is sweet, and as soon as the meat is used, thus saving a large amount of disagreeable labor.



WASHING MACHINE.

Messrs. Eds.—In the Annual Register for 1857, there is a Washing Machine which you recommend, and during last year there was an inquiry made in the Country Gentleman as to the best machine, and you refered him to the Register for a description. I have that, but there is no mechanic in this part of the country that can make a machine from that description. A. B.

Having recently had a number of inquiries similar to the above, we copy the figure of the washing machine alluded to, and give the measurements of the different parts, which will probably enable any mechanic of fair abilities to make one. The trough or box for holding the water should be made of clear inch and a quarter plank, and be secured very strongly at the corners, so as not only to be water-tight, but to withstand the pressure of the board. It should be about 14 inches wide inside, 23 inches long, and 11 inches deep. The legs, to which the corners in front are firmly nailed or screwed, (the end pieces of the box projecting for this purpose as far as the thickness of the legs,) should be an inch and a half thick, 3 inches wide, and two feet long to the top. The standards for supporting the swinging or perforated board, screwed to the outside of the box, are strips one inch thick, and three or four inches wide; they have a notch at the top for the pivot of the swing board to turn in—they rise two feet above the top of the box. The handle A, and the thrusting bar C, attached to it by the strong joint D, are both of cast-iron—the handle is 18 inches long, and the joint D is 3 inches from the end B. The bar C is 10 inches long. The perforated board, a small portion of which is shown in the cut, just swings freely inside the box, or within half an inch of the bottom. Now, by working the handle A backwards and fowards, the connecting bar C thrusts the swing board against the back side of the box, pressing with great force the clothes placed there. The clothes are placed only on this side of the swing board, and not on both sides. When the handle is drawn back towards the operator, there is space of about 8 inches for the clothes; when full pressure is given, this space is reduced to three or four inches, and the quantity of clothes should be just sufficient to fill it The bottom of the swing board has a sloping projection or ledge running its whole length, and wide enough to touch the back of the box, when pressed against it, to prevent the clothes from working under it. The bar C is notched so as to regulate this space—and these notches, which are large and strong, fit a very stout iron projection at the top of the swing board, screwed on firmly, and secured by clasping the top of the swing board.

The patterns for the cast-iron handle and bar, being simple, could be easily made. It seems strange that this simple, efficient, and valuable machine should not be found anywhere, in market. The one which we have now used for many years was made by a mechanic of small business, who has since given it up—the cost about six dollars. It is easily worked by a boy ten years old.

Notes from Correspondents and Exchanges.

The Royal Irish Society.—The coming Exhibition of the Royal Agricultural Improvement Society of Ireland, is to be held at Cork, July 25th. The following paragraph in the Irish Farmer's Gazette of a recent date, has accidentally escaped earlier notice:—

> "We take the opportunity of reminding those of our American friends who may be desirous of procuring stock, that Cork is particularly convenient for them, Queenstown being now the point of departure and arrival of a weekly line of steamers to and from America; and we hope that our excellent contemporary, the Country Gentleman, (Albany,) and our other American exchanges, will bring this fact under the notice of their numerous readers."

It gives us pleasure to comply with this request; and we may add that, judging from the columns of the Gazette, more interest than usual is taken in the show referred to.

The Agricultural Societies of Massachusetts.—W. Latham, Esq., of Bridgewater has been kind enough to transcribe for our columns the following list of the names and residences of the Secretaries of the Agricultural Societies in the Commonwealth of Massachusetts, for the year 1860—to which we add the time when each will hold its next annual exhibition, so far as we have been able to ascertain:

Massachusetts—Richard S. Fay, Boston—no Exhibition, we believe.
Essex—Allen W. Dodge, Hamilton—Exhibition Sept. 25.
Middlesex—Joseph Raynolds—Concord—Sept. 20.
Middlesex South—James W. Brown, Framingham—Sept. 18.
Middlesex North—George Stevens, Lowell—Sept. 13.
Worcester—Henry R. Keith, Grafton—Oct. 2.
Worcester West—Charles Brimblecom, Barre—Sept. 27.
Worcester North—Wm. G. Wyman, Fitchburg—Sept. 25.
Worcester South—Samuel H. Hobbs, Sturbridge—Oct. 4.
Hampshire, Franklin and Hampden—H. K. Starkweather, Northampton—Oct. 4.
Hampshire—Lucius N. Boltwood, Amherst—Oct. 11.
Hampden—J. N. Bagg, West Springfield—Sept. 20.
Hampden East—George Robinson, Palmer—Sept. 18.
Franklin—James S. Grennell, Greenfield—Sept. 27.
Berkshire—Thomas Colt, Pittsfield—Sept. 27, or Oct. 4.
Housatonic—Samuel B. Sumner, Great Barrington—Sept. 26.
Norfolk—H. O. Hildreth, Dedham—Sept. 27.
Bristol—Lemuel T. Talbot, Taunton—Oct. 2.
Plymouth—Williams Latham, Bridgewater—Oct. 4.
Barnstable—S. B. Thinney, Barnstable—Oct. 9.
Nantucket—James M. Bunker, Nantucket—Oct. 11.
Martha's Vineyard—Henry L. Whiting, West Tisbury—Oct. 16.

Western N. Y. Ag., Horticultural and Mech'l Association.—The Directors of this new Association held their first meeting at Rochester, on the 26th ult., and organized by electing P. Barry, President, and D. D. T. Moore, Secretary. The Secretary was instructed to procure and open books for obtaining subscriptions to the stock of the Association, and a committee was appointed to solicit subscriptions. We learn from the Rural New-Yorker that the proceedings throughout were "quite harmonious."

Never Misses.—I have been a subscriber to your old "Genesee Farmer," "The Cultivator," and "The Country Gentleman," more than twenty years; of the latter *I have not missed a number*. On account of the "hard times" I have thought seriously of discontinuing it, but I have come to the conclusion that I cannot afford to cut such an old and *valued* acquaintance. A. K. *Whitewater, Wisc.*

Refuse Tan.—A correspondent of the North British Agriculturist writes to enquire the value of refuse tan as a manure, as he can obtain it at a small cost in large quantities, to which that paper replies, "refuse tan is of little value as a manure. You should obtain it for carting away. Used as a litter it will absorb liquid manure. The soils to apply it to are tenacious soils, such as cold clays."

Spring Wheat.—I see that some of your correspondents think wheat is a hard crop to raise, but I disagree with them. The past season I sowed four bushels of China wheat on two acres of ground, and harvested 65 bushels from the same. The above crop was raised without manure of any kind. If any of your subscribers can beat that, I'll try again. E. B. *Butternuts.*

Large Ear of Corn.—H. Keller of Wrightsville, does not come up to the ear of corn I had in Frederick, grown by David Kemp, (one of your subscribers,) in the year 1837. It contained 1812 grains. I could never get its equal, though I gave a reward of $5 for the largest ear.
Pomona, Md. W. C. H.

WHITE BEANS.

The growing of white beans as a general farm crop, will no doubt receive a renewed impetus from the success of experiments in feeding them to farm stock the past winter. It has been found that they are of high value for sheep, fed whole and raw, and when mixed with other grains and ground, make meal or provender, readily eaten by cattle, hogs and horses, and that of the most nutritious kind. Poultry can also be fed upon them, if first cooked, and we have seen them eaten raw by hens. Of their culinary uses we need scarcely speak—they have long been known and prized by the human race as a hearty and nourishing vegetable food.

Belonging to that class of plants which draw lightly upon the soil, and being planted in rows, so as to admit of the use of the horse-cultivator and clean culture, they may profitably take the place of the summer fallow before wheat and other autumn crops. And if fed out upon the farm, their culture will constantly enhance the fertility of the same. We have that faith in these statements that leads us to put them into practice, and in resuming wheat culture, shall grow beans as a fallow crop, and for feeding sheep and cows, for which we have already employed them to a considerable extent, and with very satisfactory results.

Beans do well on any dry mellow soil, if we except muck, but are best suited with the best corn soils, moderately fertile, but not directly manured. A clayey loam will grow good beans—even a clay soil, thoroughly drained, will do so. We may safely say, that on any soil sufficiently warm and deep to produce wheat, we may grow beans profitably as a fallow crop.

After the other spring crops are sown, and the corn planted, getting in the bean crop fills up the few weeks which intervene before "hoeing and haying." Turning under a clover sod or any loam land greensward with a flat furrow, and then harrowing thoroughly, so as to get a mellow soil, we would be ready to plant about the first of June. This can be done with a common seed-drill, arranged so as to drop single beans two inches apart, and two and a half feet distant in the rows. They are more conveniently hoed, as well as pulled, if planted in hills, the same distance apart in the rows, and from fourteen to eighteen inches distant in the drills, according to the strength of the land and the habit of the variety planted. For hill planting, we first mark out the drills with a marker, making three or four rows at once, two and a half feet apart, and then plant across these with a hand-planter—putting from four to six beans in the hill. It is sometimes necessary in using these planters to go over the ground with hoes, so as to make sure work of every hill—some always failing get covered with mellow earth.

On such land weeds are seldom troublesome—if any should appear, as soon as the beans got three or four rough leaves, we would on a dry day turn in a flock of sheep. They must not be too hungry when they come in, or remain after their work is done, or they may injure the beans. Then, when the plants were six inches high, the passage through the rows of a horse-hoe, set so as to throw a light furrow of soil toward the beans, would finish the culture, for they would by that time branch out so as cover the ground. It should be remembered that beans will not bear working while wet; the earth falling on the wet leaves, rusts them, and injures their growth. On foul land the horse-hoe should be used early, as soon as the weeds appear, and frequently, as fast as they grow up, and it will be no great task to exterminate them. Clean culture should be the rule with this crop—and especially so if we grow it, instead of summer fallowing preparatory to a wheat crop. The growth and yield of the beans will be much lessened by a weedy state of the soil, and their even ripening hindered.

Though they may not bring as high a price in market as some other kinds, the small or "medium beans" are found the most profitable on several accounts. They yield well, ripen early and evenly—both important considerations—and are more easily cured and fitted for market, than the larger and later varieties. Their value for feeding purposes, is no doubt fully equal to that of any other.

Another inducement to attention to this crop, to wool-growing farmers, is the value of the stalks or straw for fodder. We have frequently referred to its use when speaking of winter forage for these animals. The subject of harvesting may be left until a more seasonable period.

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[For the Country Gentleman and Cultivator.]

TURNING STOCK TO GRASS EARLY.

Messrs. Editors—If I rightly apprehend the spirit of your valuable paper, it is open to the discussion of agricultural matters and the experiments and experiences of agriculturists generally, however widely they may differ in their results. Now your issue of March 1st, contained an article from the pen of Mr. Emerson of Hollis, Mass., under the above caption. Mr. Johnston, near Geneva, replies, and denounces the views expressed in that article; but I for one am inclined to believe that the article of Emerson is justly entitled to some credit for the following reasons: The Hon. Azor B. Crane of this place, bought fourteen farrow cows April 23, 1857—turned seven of them to grass that day—hired the others kept three weeks on good hay—then turned them with the first named seven to grass. The first seven sold, before July 15, for $5 per head more than the others brought two months later—the late ones selling for less per lb. for not being fit for the butcher sooner.

Next, two steers, turned to grass April 20, 1858, (by the same gentleman,) had no hay or grain after—weight about 2,000 lbs.—killed in August—had gained over 500 lbs. liveweight. They had run in a range with thirty others.

June 16, 1858, turned in the same range twenty-three steers—had been kept on hay to that time nearly—were in much the same condition as the two before named—weight 950 lbs. each, or a fraction over. Run till Nov. 1—weighed in like condition on same scales—had gained 298 lbs. per head. I can give you other experiments if called for.

Now for opinions. While driving last named lot to be weighed, we met a cattle-man of great experience in cattle-keeping, who was raised in our town, and has grown old and rich in the business, and on being asked how much they would gain by Nov. 1, replied—"Not much; the best of the season is gone." After the last weighing, I asked another gentleman, similarly situated, how much steers should gain in one grass season. He said 500 lbs. I told him 298. They should have gained more, said he. But on being told they were turned out so late, he said cattle must go to grass early to gain well. And that kind of sentiment prevails in this county among men who make money by fatting cattle.

Of sheep we keep but few—all ewes—and endeavor to get their lambs to market by July 15, at from $4 to $6 per head, and often let the ewes go to market at the same time. The custom is to turn them to grass day times as soon as it appears—generally early in April. I have often bought store ewes near Mr. Johnston's in the fall, that looked as if they had been turned to grass late the spring before, together with her lamb, for $1 each—brought them home and sold their lambs next June from $4 to $5.50 per head, the ewes being worth nearly as much—fed no grain except in March when the ewes were coming in, and always let them to grass as soon as it appears. I can particularize if called for.

Mr. Johnston has farmed long—has been observing, and has, I doubt not, arrived at many correct conclusions pertaining to farming in his locality. He considers underdraining as the *one* thing needful. Well, it may be for him. I should underdrain, or keep my cattle confined until June, if experience should prove either or both advisable; and for those who are situated on the slope of high clay ridges, where all the water that accumulates above must pass down over the surface, underdraining is not only proper but necessary; and to turn stock to grass on such land early, would be the height of folly. But where land is sufficiently uneven in surface to give free circulation to water, with a porous subsoil—where the soil is fit for the plow in spring when the frost is gone, underdraining seems unnecessary; and where, from being used as a cattle range for years, many parts get so rich that the grass falls down and rots, if not eaten early; and where are some swaley parts, (too rocky to underdrain,) the grass of which is eagerly devoured if cattle have access to it early, if not eaten before better grasses get up, will be left, it seems to me, to turn out. I forgot to remark, cattle or sheep are not apt to fatten fast either on the grass or hay of lands where underdrains are necessary every fifteen feet. B. T. Crane. *Putnam Co., N. Y.*

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[For the Country Gentleman and Cultivator.]

HOW TO BUILD BOARD FENCE.

Messrs. Editors—One year ago this present week, your paper contained the plan adopted by J. H. H., of Seneca Co., in building board fence. His fence combines economy and endurance, but we venture to accept his invitation to show a "better way," and shall give our reasons.

We use *split* posts, from the fact that the same timber will yield full one-third more in number than can be obtained by sawing. The ground is marked off for a fourteen foot board; two lines are stretched, one several feet above the other; the posts are set by them, two and a half feet deep, and well tamped level full. The butt ends down, are sufficiently lasting for an ordinary life-time, if made of good white oak, while the pins and flat stones used by your correspondent to keep them in the ground, are superfluous.

Then for the boards; we take good hemlock, full one inch thick, and just *six inches* wide and no wider, and begin to build. The upper board is placed four feet above the uniform surface of the ground, true and even throughout the whole length. Then mark off a space of *eight* inches; begin on the second post, so as to break joints with the upper course; proceed as with the first. Then again, leaving a space of *six* inches, begin on the first post again; breaking joints with the preceding course, you may finish the third board. Once more, leave a space of *four* inches, beginning on the second post and finish your fence. Then the last board is still six inches from the ground. Here is the place to *anchor* the fence. Take the oxen; they go closer to the boards than horses; take the plow and turn two good even furrows on each side of that fence. You may then turn professor of the spading science and throw the outer furrow on the top of the inner, till the dirt reaches the board, filling, heaping full, about each post. That fence will not pull out with the frost. It takes the action of *frost on water* to do that, but the water is in the ditch.

How is the economy of all this? Breaking joints strengthens the fence, while six inch boards excuse snow-drifts, escape high winds, and they *save* lumber. This plan puts just two feet of lumber in each line or foot of fence. Caps and battens are useless. The ditch protects it from animal assault and battery. It is high enough. No beast can pass it without starting at least three feet from the boards, rising four feet high and going as far on the other side to reach even ground. Fences made on this plan have stood here for five years past; they have not risen one inch, nor are they in any place, three inches from the line along the top. But they do not take so much lumber, auger work, stone picking and sweat, as that other fence. Geo. W. Gage. *Canandaigua, Apr.* 18.

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[For the Country Gentleman and Cultivator.]

OATS—IMPORTED SEED.

Eds. Co. Gent.—Seeing recently in the Co. Gent., an inquiry whether the sowing of the heavier varieties of oats from England, was attended in this country with advantageous results, I will state that several years ago, another gentleman and myself imported from Liverpool a lot of the Potato oats, a very fine article, weighing 42 lbs. to the bushel—which we sowed. The resultant crop was also heavy, and a handsome sample; though I cannot state with certainty the weight, it was over 35 lbs., and I think it was 37. It continued to diminish in weight with each successive sowing for three years, till it reached my minimum standard for seed, twenty-nine pounds, when I again changed for the Black oats grown on Prince Edward's Island, whence I generally renew my seed trienially. This also is over forty pounds in weight when well cleaned, and the crop of last year from it weighed thirty-six pounds when cleaned for market, and yielded on thirteen acres, six hundred and fifty bushels, not lodging. Drill sown oats are found to stand better with us than hand sown and harrowed, and the difference is sometimes striking when side by side. And in my turn, I also have a question or two to ask.

Does any one know anything about the growth and habits of the Rape plant in this country; and whether it would be a good thing to sow amongst corn at the last working, to afford fall or winter pasture for sheep, or to turn in as a green crop in the spring? Also, can the seed be obtained here? An article in reply to these queries, would add to the value of your already inestimable columns, and be thankfully read by your subscriber.

Saml. P. Nicholson.

Yardville, Mercer Co., N. J., 4th mo. 28.

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[For the Country Gentleman and Cultivator.]

USE OF FLAX SHIVES.

Eds. Co. Gent.—In answer to your correspondent in regard to flax shives as a manure, I would simply state my experience with them. On dry soils I have found very little or any benefit from their application. It takes a long time for them to decay, and they are very much in the way in cultivation of crops.

In moist and wet soils, I have seen a decided benefit from their use. On a low land meadow in my neighborhood, where stood a flax-mill, and where the shives had been profusely used, I observed a great increase in the crop of grass, and this continued for twenty-five years.

Decidedly the best way to use them, is to bed down the stock in the stables, and to spread them occasionally over the barn-yard. They absorb the liquid manure and soon decay; and then, like all vegetable matter, become valuable.

I have found the dry shives of very great benefit in covering the grounds in the garden for raising vegetables, when it is prepared for planting, and burning them. The ash is of some value, and warming the surface a little more, but the great benefit is the destruction of a vast number of insects so destructive to vegetation, and the plants get large enough before others appear, to withstand their attacks. I could not raise melons or vines of any kind, until I adopted this plan, and have for many years been successful since I adopted it. Wm. Newcomb.

* * *

Prolific Sheep.—We have a flock of Sheep consisting of 1 ram, 8 ewes, and 16 lambs. There were nine ewes, but one, after having a pair of lambs, died, and also one lamb—the other was raised by hand, making two lambs for each ewe, as one ewe had one lamb only. This we consider a good turn-out. Can any of your readers beat it? D. M. Nesbit.

EFFECTS OF CLIMATE ON FLOWERS.

Our climate is, in some respects, much inferior to that of England for the cultivation of some flowers. The changes of temperature here are more frequent, sudden, and extreme, than there; our winters are more severe, our summers hotter, and our atmosphere dryer. All these things are to our disadvantage in reference to the cultivation of many kinds of plants. For instance, the Pansey can never be grown in this country to equal, throughout the season, those grown in England, whose moist, equable climate is perfectly congenial to this beautiful flower. For a month or two in the early spring, fine panseys may be obtained here; but as soon as the summer sun has arrived at its usual fervid heat, then the flowers begin to dwindle, in spite of all that can be done in the way of favorable exposure or attentive nursing.

The Daisy is another beautiful flower which will neither stand the cold of our winters or the torrid heat of our summers. As with the Pansey, the flowers are comparatively worthless after the cool spring months have passed.

The Auricula is a flower of great beauty, but difficult of cultivation with us on account of the great extremes of temperature. The Polyanthus, belonging to the same family, (Primula or Primrose,) is much more hardy, and succeeds perfectly well in a shady location, with rich, moist soil. The Dahlia is also much affected by our hot summers, and does not succeed as well as in England.

The Anemone and Ranunculus, bulbous or tuberous rooted plants, are rarely cultivated in this country with much success. A moist atmosphere seems to be absolutely necessary to the perfection of these flowers.

This list might be extended still farther, but it is not necessary. It will be apparent that those plants which require much moisture for their proper development, will never flourish as well here as in those countries where showers are more frequent, the temperature more equable, and the summer heat less intense. But there are very many plants which delight in our sunny climate, and in which we can therefore equal the productions of the florists of any country. On the whole, perhaps, our climate is as favorable as any for the culture of flowers. G. B. H.

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[For the Country Gentleman and Cultivator.]

BEST TIME TO DRIVE BEES.

Messrs. Editors—In your issue of 10th May, Mr. M. M. Baldridge, in his reply to the inquiry of B. B. B., in reference to the best time for "driving bees," says: "If it must be done, the 21st or 22d day after the issue of the first swarm is the best time to secure the least possible waste. By this time the eggs last deposited by the old queen have hatched," &c., and "there is no other period during the working season of bees, when combs contain so little brood." On this point I beg leave to differ with Mr. B., and as he writes intelligently on the subject, I doubt not, upon further reflection or examination, he will incline to my opinion. Having used the Langstroth movable comb hive for several years past, I have had every opportunity for, and have taken much pleasure in, ascertaining definitely the facts on this subject, and therefore speak with some confidence. On examining a stock on the 7th inst., from which a swarm had issued within two hours previous, I found the young queen not only "hatched," but able to fly briskly, and it seldom occurs that she is *later* than two days after the first swarm issues in emerging from her cell. In my numerous experiments I have generally found that the young queens commenced "laying" between the 5th and 10th day after they were "hatched." Assuming then, that she commences on the 10th day after, (at which period a large portion of the brood of the old queen would be hatched,) at the end of the "21st or 22d day," she will have her own brood and eggs, in a very large proportion of the cells, vacated by the hatching of the brood of the old queen, and the loss would be much greater than if the "driving" had been done *ten* days after the issue of the first swarm.

The practice of "driving" bees without transferring their combs should be strongly deprecated, unless the combs are mouldy, or the hive contains too large a proportion of "drone comb," as the bees consume about 20 pounds of honey in producing one pound of new comb, besides *the loss of time;* the fallacious notion that the size of the bee is reduced, if bred in the same combs beyond a few years, cannot be too soon removed. I know of one stock in which bees have been bred in the same combs for upwards of 20 years, and yet their size is not perceptibly diminished. R. C

Baltimore, May 10.

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FARM ACCOUNTS.

Luther Tucker & Son—The system of keeping "farm accounts" is so imperfectly understood, that I propose to illustrate it on my plan—say for a ten acre farm, as follows:

Farm Account, Dr.

To 10 acres at $100, cost,	$1,000.00
Cost of tools,	20.00
do. seed,	30.00
do. manure,	10.00
do. draining tile,	20.00
30 days team work, at $2,	60.00
200 days common labor at 7 shillings,	175.00
Interest on purchase money,	70.00
Paid taxes,	10.00
Total,	$1,395.00

Farm Account, Cr.

By 10 acres increased in value to $110,	$1,100.00
400 bushels potatoes, at 3 shillings,	150.00
100 bushels corn, at 6 shillings,	75.00
200 bushels oats, at 2 shillings,	50.00
Vegetables used in family at cash price,	50.00
Value of tools on hand,	10.00
Total,	$1,435.00

The difference is $40, which is profit. For the next year begin with the value of the land at the end of the first year, $1,100, adding the tools, $10, and proceed as before. If stock is bought it is entered at cost, and credited with its value at the end of the year. "Fulton."

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REMEDY FOR CRACKED HOOFS.

Messrs. Editors—I notice some of your correspondents making inquiries concerning cracked hoofs in horses. I have seen several very bad cases, where the hoofs were cracked up to the hair. They were cured in a short time, entirely sound, by the use of a shoe made as follows:

Have a heavy common shoe made with two iron bands or strips, about one inch wide, sufficiently strong, welded to the shoe, near the heel, and made to fit around the hoof in front, within an inch or two of meeting, with a hole in each strip for a bolt to pass through, with a tap on one end. After putting on the shoe, soften the hoof by greasing—pour in a little turpentine; then put in the bolt, and draw the crack moderately tight by turning the tap. Draw a little closer every day, until the crack is closed, and you will have a perfect cure in a short time. The bands must be turned up about an inch at the ends in front, for the bolt to pass through. J. W. D. *Highland Home.*

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PROPER DEPTH OF PLANTING CORN.

Messrs. Editors—This subject was discussed before the Farmer's Club of the American Institute. Mr. Carpenter said that corn planted at three-quarters of an inch deep, came up in six days, and at two inches, nine days, and five inches seventeen days. He therefore advocated shallow planting. Now I think it would make a material difference as to the nature of the ground, and the succeeding weather. On dry sandy land, corn should be planted much deeper than on heavy clay land. On this kind of soil, if corn was planted two inches deep, and followed by wet and cold weather, much of it would never come up; and if it was planted three-quarters of an inch deep on dry loose soil, and followed by very dry weather, it would not come up for lack of moisture, in some weeks. As to the weather, this cannot be foreseen. I think one inch for wet heavy, and two inches for a loose dry soil, the proper depth J. W. Lequear. *Frenchtown, N. Y.*

[For the Country Gentleman and Cultivator.]

PEAS BEANS AND MANGOLDS.

Messrs. Editors—Noticing a call for the experience of farmers in raising peas, beans, and mangolds, I have concluded to say a few words in relation to the cultivation of these crops. Although it may not be advisable as a general rule, to substitute the cultivation of peas or beans in the place of other and more standard crops, yet there are many circumstances in which they may be grown to good advantage. As where corn has failed to make a good stand in consequence of worms, grubs, or seed rotting in the ground, or late spring frost. There were thousands, and probably hundreds of thousands of acres of corn, that were cut down by the great June frost last year, that might have been sown to peas, or planted to beans, to good advantage. Also where, for any other reason, other spring crops cannot be put in in season to do well, peas or beans may be substituted to good advantage. It being one of the principal advantages of raising these crops, that they can be put in any time the fore part of June, with a reasonable prospect of a fair crop.

A neighbor raised an excellent crop of peas last year, that were sown about the middle of June. The soil on which they were grown, of a character varying from a sandy loam to a stiff clay—the peas doing equally well on all parts of the lot, of which there was some sixteen acres. The land was fall-powed, and put in a fine condition for the seed immediately before sowing, by the thorough use of the harrow, gang-plow, and roller. No manure was applied to the crop—the soil in what may be called a fair but not high state of cultivation. The yield estimated at over thirty-five bushels per acre. Another thing worth noticing in regard to this crop, is that it was cut before it was dead ripe, and the straw made very good fodder, especially for sheep, and was all used to good advantage.

Peas may be sown early, and fed in the fall, where it is doubtful of getting a good crop from late seeding, and undoubtedly would be profitable for farmers that keep a good many hogs. But in that case, a portion should be sown late, for seed, on account of the bug. It would also be very good economy for every farmer to sow a few bushels of peas for seed, late enough in the season to raise seed clear from bugs; and thus always have seed on hand, when he wishes to sow peas where some other crop has failed.

As to which is the best crop to raise, much depends on circumstances. On strong rich loams and clay soils, peas would do the best. On lighter and poorer land, it would be best to plant beans. Beans would also be best for a market crop. But to raise to feed, I should prefer peas, as being easier to raise and take care of, and likely to produce the most to the acre.

According to my own experience, which has extended through several years, though not on a very large scale, peas are altogether the most profitable crop to raise, generally producing more bushels to the acre, and at a much less cost for cultivation. I have made a practice for several years of sowing a small piece of peas about the first week in June; and have never failed to raise fair crops that were entirely free from bugs. And for the future never mean to be without good seed peas and beans, so that when corn, or any other crop, is likely to fail, they will be ready to sow or plant in its place.

Mangolds.—For some years I have been satisfied that raising roots was a paying institution. And for the last ten years have not been without a "patch" of carrots, mangolds, or turnips; the most of the time having all three. Although as a general thing I have raised the most of and given the preference to carrots—principally because I have used them to feed milch cows and horses, and because my land, being a light, sandy loam, is well adapted to the carrot. I have also raised mangolds to very good advantage, and think they are better suited to all kinds of soils, and can be raised at a less cost per bushel than any other kind of roots. But where roots have to be raised on clay soils, I think mangolds have a decided advantage over all other kinds, being a much surer crop, and yielding much more to the acre. Mangolds have several other advantages, as in consequence of a quicker growth when small, and a greater distance apart in the rows, it is not near the work to weed them that it is to weed carrots; and as they are not troubled by the fly or any other insect, there is much less difficulty in getting a good stand of plants than there is with the turnip or rutabaga.

I have found it a very good way to plant my mangold seed. I use the same planting bag, used to plant corn out of. Plant the rows about two feet apart, the hills a foot apart in the rows, two or three seeds in the hill. This saves a good deal of work in weeding, and thinning out. And I have never had any difficulty in getting a good stand of plants in this way.

Mangolds, as well as all other roots, should be well hoed as soon as the rough leaf appears. Then the weeding can all be done with a good square cornered hoe, with less than half the work that it will cost if they are neglected until the weeds get the start of the crop, and have to be pulled by hand. The reason so many farmers think that roots don't pay, is that the first hoeing is neglected until the weeds get several inches high. Then they go through them on their knees, and pull the most of the weeds by hand, which is a very slow back-breaking operation. Nor is the great amount of labor then required the only trouble. The growth of the crop is not only badly checked, but pulling a thick mat of strongly rooted weeds, that have grown close to the tender young plant, will loosen its hold of the soil materially, and result in great damage to the crop, if it is not entirely ruined.

So much depends on thorough and seasonable hoeing, that where it is well attended to, and the land rich and in good order, mangolds, as well as other roots, are very profitable. While, although everything else may be favorable, if they are badly neglected, they may result in an actual loss to the owner. F. *Orleans Co., N. Y.*

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[For the Country Gentleman and Cultivator.]

LICE ON CATTLE.

I have used various remedies for destroying this "horrid plague;" but have found none that will accomplish it so neatly, expeditiously, and effectually as alcohol. If C. H. M. will procure a couple of quarts, (costing about 30 cents,) and thoroughly wet the affected parts with it, repeating the operation in about two weeks, (if necessary,) I will warrant a perfect cure for his "half a dozen head of calves."

I have tried this remedy repeatedly, and never knew it to fail. It is attended with no injury to the cattle. I prefer a rainy day for the operation, for the reason that the hair being partially wet, will not absorb so much of the alcohol—allowing it to spread over a larger surface. They should not be too wet however, else the alcohol will become too much diluted to kill the "varmints."

I would advise C. H. M. to do the job himself, or oversee it. If his "Pat" is like mine, he will be too apt to "make way" with the alcohol, and rub the calves with the empty bottle.

All who try the above remedy, either on their own heads or on their cattle, are requested to "report" through The Cultivator and Country Gentleman, for the benefit of the whole world and the "rest of mankind."

Hebron, N. Y. E. L. C.

Take white oak bark and boil it—take the liquid and wash the animals around the neck and over their backs. I know it to be a sure remedy. Water lime is good, Plaster is good, but the bark is the surest. J. M. A.

C. H. M. inquires for the best mode of destroying lice upon calves. Feed them fine salt and sulphur, about one part sulphur, and two parts fine salt, when the weather is is not too severe. If very cold, do not let them be too much exposed. Sulphur and salt, once in two or three days, with an application of *oil* to the parts most troubled with the vermin, and you may be assured they will leave for a more congenial clime. R. S.

[For the Country Gentleman and Cultivator.]

ASHES AS A MANURE.

Eds. Co. Gent.—The value of ashes in an agricultural point of view, is, we fear, far from being sufficiently appreciated by farmers. Many are in the habit of selling them, at from eight to twelve cents a bushel, when they might get a much higher price in the increased product, if they applied them as a manure to their crops. We will mention some of the results from their use occurring in our experience, in which we have always found them of material benefit on all dry soils.

Some years since we applied ashes, at the rate of forty bushels per acre, to a gravelly loam soil, in grass at the time, to the very manifest improvement of the product. This ground was plowed up the next spring for corn and potatoes, as well as some joining to which our ashes were applied, and the benefit of the application was plainly seen, in about double the product of the ashed over the unashed portion. The potato vines withstood the severe drouth of that year perfectly, and gave excellent fair potatoes, and the corn was equally benefitted.

The effect of the application of ashes in quantity is felt for several years. In this as in all our other trials, the product showed plainly the extent of the plot covered with ashes for several years. The same fact may be noticed of the burning of heaps of logs and brush—the ground covered by them retains its fertility for a long time.

As a top-dressing for corn, we apply two or three tablespoonfuls to the hill just before hoeing the first time, and find it profitable. We have noticed again and again, a sufficient improvement to pay for the labor at a dollar a day, and double price for the ashes, and believe that they hasten the maturity and thus increase the certainty and amount of the crop. Two years ago we gave a dressing of thirty bushels per acre to a part of our cornfield, harrowing the ashes in just before planting; and had then the largest corn, and the next year the best barley, and now the best wheat of any portion of the lot, the whole being otherwise treated alike for each crop. We have applied them in the same way to barley with equal good result.

For composting with muck, ashes are of much value—nearly equal to lime, bushel for bushel, to hasten the decomposition of vegetable matter and fit it to benefit the soil. Also in garden culture and for orchard trees, ashes prove profitable, and we hope every farmer will give them a fair trial before he allows them to be sold off the farm. Other manures should be used, and used freely; but ashes will assist in bringing their virtues into the state most available to the crop, as well as having an ameliorating mechanical effect upon the soil. B.

[For the Cultivator and Country Gentleman.]

MORE ABOUT RINGBONE.

Eds. Country Gentleman—I noticed in a late number, an inquiry for the cure of what is called a ringbone, from a correspondent who had a fine mare troubled with one for something over a year, and the answer was that there was no cure for a confirmed ringbone.

Now two years ago this winter, I had a fine colt that had a ringbone on each of its hind feet, and was so lame some of the time that I could hardly get it out and in the stable. I did not do anything for it till spring, and they got so bad that the colt had to walk upon its heels with its feet turned up, and I supposed that she was almost worthless. Finally one of my neighbors told me that he had a remedy for a bone spavin, and it was said to be a sure cure for ringbone, and wished me to try it. It was this: Take common salt and pound or grind it as fine as you can possibly get it, and mix it with spirits of turpentine enough to make it something like paste, and rub it on the ringbones (or spavin) once in two or three days, for three or four times, and if they have not been of too long standing, I think you will effect a sure cure. This colt of mine had but three applications of this medicine, and I then turned her out to pasture and she soon grew better, and in a short time was entirely free from lameness, and has been ever since. She is now coming three years old, and has as sound feet as any colt, though there are some bunches to be seen yet, but I think in two years more they will entirely disappear. P. *North Bridgewater.*

[For the Country Gentleman and Cultivator.]

UNLOADING HAY.

Messrs. Editors—I noticed a call last summer for a contrivance to take a load of hay from the cart all at once, and dump it in the mow, and I have watched the agricultural papers to see the plan come out, but as none has appeared that I have seen, I will venture to suggest one for the benefit of all, if it should prove a benefit.

My plan is, to have two or more endless ropes spread on the cart rigging, and load on them, and when in the barn, bring the ropes together on the top, on a strong double hook made fast to a stout rope; this rope may run through tackles, with a horse outside, similar to the plan of unloading with a horse fork, while a man with a guy-rope over a pulley, back side of the mow, can direct it where he chooses. Then let down and unhook the ropes on one side, and pull them out with the same power that hoisted it.

Another way, to hoist without the horse, is to have a wheel, similar to what merchants use for hoisting hogsheads of molasses and other merchandize, hung in the ridge of the barn, and operated in the same way, with guy-rope as in the other plan. Where a barn is built with the floor on one side the barn, with short middle beams, the wheel can be hung partly over the mow, so that it will need less power on the guy-rope. Now, brother farmers, if you think of a better plan for unloading hay, please let us hear it; don't run away to Washington after a patent first.

Bethlehem, Conn. L. F. Scott.

[For the Cultivator and Country Gentleman.]

AGRICULTURAL PAPERS.

Messrs. Editors—I often see from your correspondents that the Co. Gent. is a "paying institution," (I mean to those who take it.) There is no doubt of it, for I do not believe that any one can read it attentively, from week to week, without being made wiser—especially farmers, in regard to their calling. Even Slipshod would find it difficult to pursue his slovenly course after taking the Gent. He would see such a contrast between neatness and thrift, as advocated in the said paper, and his practice—that the reading of it would be like an application of hot blankets—keeping him in a sweat, I imagine, until his *system* (of farming) became cleansed from many of its impurities, and would finally result in a reformation. But the difficulty is to get this class of men to take and read an agricultural paper—the very ones that need it most.

I became almost eloquent the other day in trying to persuade an individual to take an agricultural paper, but I found my arguments were not appreciated—about all the reason assigned for a refusal was—"weak eyes" and a "want of time to read." Thinks I to myself the weak spot is just *above* the "eyes," and as to the want of time—why, that is the result of the *weakness*, and a lack of a more systematical way of doing things. I should consider myself in a "bad way" if I could not find time to read the Gent. and one or two other papers of the kind—notwithstanding I perform more than half the labor upon a fifty acre farm, and intend to have the work done in a "gentleman" like manner—all devoted to tillage and meadows. I prize your paper highly, as it is a *weekly* visitor—filled with valuable reading—just such information as every farmer needs—a mouth is too long an interval—a weekly often gives a hint just in the nick of time. My way is to begin at the beginning, and *read it through*, noting such things as are adapted to my circumstances and wants, that "stand to reason." By pursuing this course, I think your present readers, and many who are not, would be greatly benefitted by the Country Gentleman. J. L. R.

Jefferson Co., N. Y.

Inquiries and Answers.

Destroying Canada Thistles.—Will you or some of your subscribers, inform me how to kill *Canada thistles*. The seed was sown in a yard of about fifty feet square for clover seed, and as there is no thistles here of the kind, we wish to prevent their spreading further. The yard is a perfect mat of thistles. Any information whereby we may dispose of them, will be thankfully received. C. T. Samson. *Jones Co, Iowa.* [Canada thistles are very easily destroyed, by observing one simple requisite, namely, to prevent their growing above ground, or in other words not to allow them *to breathe*. If they are cut off with a hoe the very moment they appear at the surface of the ground, the roots will in a few months die. But if they are allowed to rise a few inches above the surface each time before cutting off, they will not be destroyed, the temporary supply thus furnished by the young leaves keeping the roots alive. A small patch may be smothered in one season with a layer of boards, covering the joints closely with a second layer. The best and cheapest way on a large scale, is successive deep plowings, the first early in summer or about the time they appear in blossom, and the rest about once in three or four weeks, or as soon as the young plants begin to peep. The plowing must be very thorough and perfect, and not leave any stragglers, and the crop will be completely killed in one year. This mode succeeds best on heavy soils—on light or porous ones, the plowing must be more frequent and more thorough and perfect. On a small scale, when the plow cannot be used, the same result may be obtained by successive spadings; but in a door-yard, which cannot be spaded, an unremitting use of the hoe will do the work effectually.]

Seeding to Grass.—I have a meadow lot that I wish to seed down. I have had corn on it two years. Last fall I commenced, and this spring finished thoroughly underdraining it with tile. I have now put in oats—would you in the fall put in rye and timothy, and clover next spring? or rye this fall, and timothy next fall, ('61,) and clover the following spring, ('62,) or leave out the rye altogether? An answer will much oblige R. *New-Jersey*. [The mode of seeding must vary with wants and circumstances. Should the ground be quite moist at the close of summer, it may be at once seeded to timothy alone, brushing it in, and a good crop will be produced next year. If clover is a principal object, the operation may be left till early spring, and the clover and timothy alone sown and brushed or rolled in. If a crop of grain is a prominent object, seed as usual with the grain, in which case the crop of grass will not be afforded until 1862. We think the practice will yet be more generally adopted of seeding down without any grain or other crop at the time, where good, thorough and clean farming prevails. The only advantage of seeding with a grain crop is the saving of one plowing, while it has several disadvantages.]

Ashes as Manure.—There are large quantities of leached ashes shipped from this quarter—they have not been used for manure about here—please post us up on the subject, and oblige the readers of the Cultivator in Rouse's Point. *N. Y.* [Ashes, whether leached or unleached, have generally proved beneficial, if applied at the rate of a hundred bushels or so per acre; in some instances the benefit has been eminent and striking—in others more moderate, and in a few imperceptible. Experiment is needed in each locality to determine the amount of the benefit. We would by all means recommend our readers at Rouse's Point to keep and apply their ashes, and measure its results.]

Egyptian Corn.—Please inform me whether you have any knowledge of this corn, or the person who advertises it. I have sometimes sent money to such advertisements, and received neither seed nor answer. If you know the article to be genuine you may send me one dollar's worth, and I will remit you the money as you direct. M R. *Montgomery Co., Pa.* [We have no personal knowledge whatever in relation to this "Egyptian Corn," and as we keep no seeds of any kind for sale we could not in any event comply with our correspondent's request to send him "one dollar's worth."]

Grubs and Cut Worms.—I am now busily engaged plowing my ground for corn, and find it thickly infested with both black and white grubs, and knowing no remedy by which I can extirpate them, it induces me to seek through the medium of the Co Gentleman a remedy for their destruction which will not injure my corn. G. W H. *Esopus, N Y.* [We suppose the black grub here spoken of, is the dark, dull colored worm often called the cut worm, which cuts off small plants of the corn in the night, and conceals itself under the surface of the soil in the day time. They commit their depredations in all kinds of soil, poor and fertile, and are not, like the wire worm, repelled by fresh manure. It was formerly a notion that when one of them was cut in two with a hoe, each end grew, and made thus two worms—about as likely as that a pig's tail cut off will grow and make a second pig. There are three remedies, all of which may be combined. As they eat off but a single corn plant at a time, plant a double quantity of seed, according to the old rule—

> "One for the blackbird, and one for the crow,
> And two for the cut worm, and four for to grow."

Next, employ a few active boys to pass every morning along the rows, and whenever they see a plant beginning to wither, dig for and easily find the depredator—or offer them so much per dozen or hundred for all they can find and bring in a tin pail. A third remedy is to take a dibber, (or sharp iron tool an inch or two in diameter,) and make a smooth hole beside each hill. The worms will fall in and cannot get out.

We know of no remedy for the white grub but to employ boys as mentioned above.

Broom Corn.—Have you a work on the culture and gathering or harvesting of broom corn? What is the present price per ton and the best market to buy it? I do not see the price quoted in any newspaper, or in the "Country Gentleman." I see an account of a large yield of broom corn on page 240 of vol. 14, in the Co. Gent., this is all I can find in relation to the above. J. N. F. *Two Rivers, Wis.* [There is no book issued on this subject, as we are aware, but our correspondent will find some notes upon it in another column, in answer to another inquirer.

Mole Plows.—An Iowa correspondent wishes the opinions and experience of the farmers in the western states, in relation to the use of mole plows for draining, and we shall be pleased to hear from any of our readers on the subject.

Beans.—Will you or some of your correspondents, inform me what variety of bean is the most profitable to raise for market—whether a tolerably strong limestone soil would be adapted to its culture—when they should be planted—and how? O. N. W. *Dover, Ky.* [There are several varieties of the white bean, differently known in various neighborhoods, that have been found profitable for field culture—but we are unable to say which is best, or to give the several names. Different sorts have proved favorites in their respective localities. Sufficient attention appears not to have been given to the improvement of varieties for farm crops. The value of bean meal for milch cows in winter, is such as to commend their cultivation, even if there should be no other market for them.]

Clover.—Last summer there was a little patch of strange looking clover, started up on our farm. It resembles the ordinary red clover, except that it grows taller, is earlier, and has an entire different blossom, which is of a deep purple color, and much larger than the ordinary clover blossom. Is this the "pea-vine clover," that I see advertised in your columns? The seed is uniformly a deep yellow, and somewhat larger than the common red clover seed. Perhaps we are behind the age in this section. A word from yourselves or correspondents may enlighten us. F. G. D. *Berks Co., Pa.*

"Beer Corn."—Enclosed I send you a sample of what is here called "Beer Corn," said to have been found in a spring in the Rocky Mountains. This remarkable substance, when put into sweetened water, soon acts as a ferment, and produces a kind of *beer*. Any explanation in regard to its history or the *rationale* of its operation, would be doubtless acceptable to the readers of the "Country Gentleman." J. W. *Henderson, N. C.* [We have no knowledge whatever in relation to the substance enclosed to us.]

English Yew.—Have the English *yew trees* ever been grown in this country? Where can they be procured? [The English yew has been considerably cultivated in this country, and generally proves hardy, though sometimes a little bruised by sharp winters. It does best in the shade. It may be had of all the principal nurserymen who deal in ornamentals.]

Morgan Horses.—Will you, or some of your subscribers, inform me, through The Cultivator, which was the best horse, in reference to speed and action combined with usefulness, that was ever got by the original Justin Morgan horse; and whether he had any Canadian blood about him. J. H. H. *Sand Brook, N. J* [We must leave the first question for others to answer. The old Justin Morgan horse had no Canadian blood in him.]

Rice Meal.—Can you not induce some of your correspondents to communicate through the columns of Co. Gent., (which should be a "vade mecum" with all farmers and owners or lovers of farms, gardens, stock, &c.,) their experience in the feeding of rice meal? There has been considerable of it sold here during the past two years, and I should like to know from those who have tested it, the relative value of it when compared with oil meal, cotton seed meal, or corn meal. I have used several hundred weight—find cattle and pigs very fond of it, but have not had any *tests* made of it. Perhaps some southern friend will favor us with particulars. J. H. *New-York.* [We hope some of our readers may be able to answer the above.]

Mower and Reaper.—I have twenty-five acres of fresh grass, and thirty of rye at home, and upon another place on the shore some fifteen acres of wheat and rye, and any quantity of salt meadow, that I please to mow. Now what I desire to know is, what kind of a combined reaper and mower shall I get to do all this work to the best advantage? I have been pleased with the Buckeye; but who has tried it on salt meadows, and will it work with an ox team as well as horses? Please reply through The Cultivator. E. O. *5th mo.* 2, '60.

Inquiry.—Please to inform me what Nasturtium is, and how it is used. A Reader. [*Nasturtium* is the botanic name of a cruciferous plant, known by the English name of *water cress.* With a slight change or Anglicism, the name is also applied more commonly to the *Tropeolum*, sometimes called Indian cress, often cultivated in gardens as an ornamental plant, but more frequently for its young fruit, used as a substitute for capers in pickling.

Coloring Black.—I would like to inquire if the recipe for making black ink, given lately in the Cultivator, would make good coloring for cloth, and whether it would be injurious to the cloth, &c. D. B. Roye. [We are unable to answer this question.]

Stoppage of Milk.—I have a cow, which has a stoppage in one of her teats up next to the udder. Is there any remedy for it? Some say, keep milking it, and all will be right in time. I have tried it and it is useless. I have never known an instance but what that part of the udder failed eventually. *Butternuts.* H. P. M.

Spanish Chestnut.—I would like to ascertain through the medium of The Cultivator, if the European chestnut can be cultivated to advantage in our climate. N. H. P. [The Spanish chestnut, the most approved of the European sorts, being much larger than our common chestnut, does well in the middle States, but is slightly tender at the north, where also the seasons are hardly long enough for the full perfection of the fruit.]

Site for Vineyard—Grade Cattle.—I wish to avail myself of the very valuable privilege afforded to your correspondents and subscribers, of asking a little advice through the column of your paper devoted to "answers to inquiries." 1st. I wish to plant a vineyard of five or six acres, and have two sites selected, but cannot decide between them. One is in an old clean field on a hillside, facing southeast, and is a very rich black soil; the field has not been cultivated for some years, but has been in thick blue grass pasture. The other site is on the same hillside, immediately above and adjoining the first, but is only partly cleared, and has never been plowed. It is a very nice rich soil, slightly interspersed with lime stones. Which of the places would be preferable, and what preparation should the ground undergo before setting out the vines? 2d. I have a bull calf whose grand sire and grand-dame on his mother's side, were imported Ayrshire, and all his other ancestors Herd Book short horns. Can he be called *thorough-bred?* W. McGuire. *Brooke Co., Va.* [Probably either site would answer, provided the ground can be properly prepared, and kept well cultivated. We cannot, for want of information on all local points, state positively which would be best, but may give some conditional suggestions. The lower site will probably be warmest, and will therefore ripen the crop sooner; the upper one will be more free from night-frosts, which sometimes farther north, injure the vines during the intense cold of winter. The preparation of the soil should be first plowing, next subsoil plowing to deepen and mellow the subsoil; and thirdly, deep trench plowing, to work in heavy applications of manure—making the whole a deep, rich mellow bed. If the upper portion, being but partly cleared, cannot be thus prepared, it will of course be unsuitable. A cross between two distinct breeds is not a thorough-bred animal.]

Law about Birds.—There was a law passed, I understand, by our Legislature last winter, for the protection of birds. If such is the fact, will you please furnish us with its provi[illegible] T. [There was such a law passed, which declares [illegible]rson or persons shall, at any time, within this State, kill, cage or trap any nightingale, nighthawk, blue bird, yellow bird, Baltimore oriole, finch, thrush, lark, sparrow, wren, martin, swallow, or any bird of the species of woodpecker or other harmless bird; nor shall any person or persons kill, cage or trap any bobolink or robin, between the first day of February and the first day of October, in each year, under a fine of fifty cents for each bird so killed, caged or trapped."]

Red Cedar Hedges.—Why would not "red cedar" make a good hedge? Have any of your readers tried it? D. M. N. [We have seen some dense natural plantations of red cedar, that appeared nearly impenetrable, but most of the sheared hedges become open at bottom and do not succeed well. There are, however, occasional exceptions.]

Working Mares with Foal.—Should mares be worked when with foal? D. M. N. [Moderate or light work does well, but when severe it is injurious and sometimes fatal.]

Lime.—Is lime better to be applied in the fall or spring? D. M. N. [It is not important, provided it is finely powdered, so as to be evenly spread and diffused. Autumn application favors its more thorough diffusion through the soil, by the time spring crops are sown, and is thus a gain in time.]

Chestnut and Hemlock Boards.—Which will last best, chestnut or hemlock boards? D. M. N. [Chestnut is the more durable; and many times more so where the boards are subject to the action of soil and air, as near the surface of the ground.]

Spreading Lime.—Do you know of any machine that can be depended upon to spread any desirable quantity of lime to the acre. D. M. N. [The broadcast sowing machines will spread pulverized lime, but we are unable at present to say how much is the largest quantity per acre—probably not in sufficient quantity to prove advantageous.]

Alderneys.—*A. R. C.* We believe that strictly speaking, the channel island cattle are more correctly termed *Jerseys*, although usage with us predominates somewhat to the other, and even in some parts of Britain more common, designation.

F. You will find an admirable article on Draining, together with precisely the information for which you inquire on the subject of Fruits, in Volume Two of *Rural Affairs*, which we send postpaid for $1. It contains 450 engravings.

Green Crops.—Please give your opinion respecting the use of green manure on grass land. E. S. A. *Iowa.* [Turning in green crops, as a general rule, is peculiarly adapted to increase the growth of grass.]

AGRICULTURAL PAPERS AS PREMIUMS

☞ The receipt of the Schedule of Premiums offered by the Bucks Co., Pa., Ag. Society for their exhibition at Newtown, Sept. 26 and 27, affords us the opportunity of touching upon a topic, on which for various reasons we have heretofore preferred to say little. We refer to the substitution of Agricultural Journals in lieu of small money premiums, as awards at County or Town Exhibitions.

It appears reasonable and proper, that the two agencies to which is undoubtedly due whatever of agricultural advancement we are now making—our Agricultural Societies and Papers—should work together wherever it is possible to promote the cause in which they are mutually engaged. The enlightened views and the conviction of the pressing importance of rural improvement, on the part of the founders and managers of many of our most flourishing Societies, owe their existence mainly or wholly to the agency which such periodicals as ours have exerted in diffusing an acquaintance with the experience elsewhere acquired, and the means of progress elsewhere devised. And it would be difficult, indeed, to estimate how large a share of the popular support which Societies are receiving, must also be ascribed to the same source.

It is not the intention with which we write however, to challenge comparisous between the results accomplished by these two agencies, or to claim for either any support from its fellow beyond that which its intrinsic merits shall command. It may nevertheless be remarked that it was not until the agricultural press had already acquired a wide circulation, that our Societies were anywhere placed upon a popular and effective footing. It diffused the knowledge of those improvements, in adopting and advancing which the members of a Society compete together—the introduction of better stock and implements, the extension of horticultural taste, and, more than all, the amelioration of farm-practice in those directions in which the Society is least able to exert a potent influence.

It is the truth of this and much more that might be added, which, together with other considerations, early led the managers of Agricultural Societies to the idea of awarding copies of Agricultural journals instead of small money prizes. The very fact of their periodical appearance, is calculated to be a contant reminder of the means by which they were obtained, aside from the direct incitement to effort presented by their contents.

But in all these matters of policy, it is experience which bears the strongest testimony. Nowhere has this question been tested so generally and on so large a scale as by the county societies in the State of Ohio, and in no State are the societies—so far as at a distance one is able to judge—more generally well established and full of vitality in "good works." Several of the societies in this State, have made the experiment at different times upon a larger or smaller scale, and many are making it now; and we have had direct evidence of the fact that their prosperity and success has never been greater than when they were doing the most to induce their members to read, and to place the means of reading in their hands.

The Society named at the head of this note, presents an additional case in which experience has justified the action of judicious managers in the direction alluded to. The Bucks Co. Society yields to none of its class in respectability and influence, and its board of officers, headed by the President, Wm. Stavely, Esq., have been slowly feeling their way and testing the working of this system, until several hundred copies altogether, of this and other Agricultural journals, have now found a place upon its prize list.

Another Pennsylvania Society that has fairly and fully tested the question, is that of Chester Co., the headquarters of which are at West Chester; no one can be better qualified than its indefatigable Secretary, J. L. Darlington, Esq., to judge of the working of the system after several years of thorough trial; and, in the present state of general interest in the question, perhaps he will be kind enough to communicate for the benefit of our readers, the results of his observation and experience. We know, at least, that his Society is constantly extending its sphere of active usefulness, for we have a letter before us from Mr. Darlington in relation to the proposed establishment of a Library for the consultation of its members.

We might allude to the testimony we have received from other States, particularly from the Societies and Farmers Clubs of Massachusetts, in farther support of what has been said. Our only object has been to respond as briefly as possible to recent inquiries as to the policy of our Societies upon this point as tested in the actual adoption of the system, and it is with regard solely to the policy of the Societies themselves, that we have ventured to advocate its adoption.

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Fresh Strawberries, says the California Farmer, San Francisco, March 23, "have appeared in our market, and are sold at $2.50 a pound."

[For the Country Gentleman and Cultivator.]

VALUABLE BOOKS FOR FARMERS.

Farmers do not read half enough. If they would only spend their money for such agricultural papers as the Co. Gent. and Cultivator, and H. F. French's Farm Drainage, instead of spending their time reading so much flimsy trash as they are accustomed to read, they would be able to perform much more labor with the same force—would have more productive farms—would raise better crops and better stock of every kind, and would be far better citizens.

When I was in Albany I purchased at the office of the Co. Gent., French's Farm Drainage to read in the cars while on my way home; and I am sure I got more than one dollar's worth of information out of it before I got home. Farmers should make a present of such books to their sons. That book will be of incalculable benefit to the country.

I have just made a present to my wife of a new book just issued by C. M. Saxton, Barker & Co., 25 Park Row, New-York City, entitled "Our Farm of Four Acres." If I had as many wives as King Solomon I would give each of them a copy of this book, so that they might learn to make good butter, and to be the best housewife in butterdom. Farmers whose wives spend three or four hours in churning, and then have butter more like soap grease than butter, should get this book. I defy all Orange Co. to turn out neater and sweeter butter than is made by my wife; but still she was able to learn many things from its perusal.

Another book, published by the same firm, which every farmer should read, as it is replete with useful facts, is "The Yale Lectures." Farmers who read most, generally succeed the best. S. Edwards Todd.

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[For the Country Gentleman and Cultivator.]

THE MANAGEMENT OF THE COLT.

Messrs. Editors—In the first place, never entrust him to the care of a person of ungovernable temper. Secondly, he should be treated with kindness from the beginning until he is ready for labor. Since Mr. Rarey laid his method of subduing the horse before the public, I have made the horse and his diseases my study. The colt should be commenced with when quite young, and handled carefully, as he is quick to resent any injury. I begin as soon as he is able to run about—get him so that he will not run away at your approach—get his head in your hands—if he wants to get away, let him—you can easily get him again. After handling the head so that he is not afraid, pass on to the side and limbs. The sooner he gets used to having his legs handled, the easier he will be to shoe when necessity requires it to be done. See that the dam gives plenty of milk. If she does not, teach the colt to drink cow's milk; there is nothing better to promote the growth. Great care should be observed in not using the dam so as to heat the milk, as a great many colts are rendered worthless by so doing. I should in no case let the colt remain with the mother after it is five months old, as it gives her time to get in good condition for winter, and it is also the best time for him to shift for himself; do not let him remain out after the nights get cold and frosty, as it will do him no good, but much harm. There is plenty of skimmed milk at this time of year; give him all he will drink; it will not hurt him. After he is weaned is the time to commence halter-breaking him; the method if desired, I will give in my next, and also the time of harnessing and driving the colt.

Northeast, N. Y. A Constant Reader.

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SHEEP TROUGHS AND RACKS.

A good trough for sheep can be made out of a half chestnut log, by digging it out, and driving in four pins to raise it from the ground.

A good rack is made by taking a white oak piece, say 6 inches in diameter—then bore 1¼ inch holes slanting inwards, and driving rungs in, say 2 feet long, (which can be rove out)—then put four legs in the bottom to make it the desired height. J. T. H.

THE CULTIVATOR.

ALBANY, N. Y., JUNE, 1860.

☞ During a brief visit in Western New-York last week, we had an opportunity of seeing considerable of the growing wheat in the counties of Cayuga, Seneca, Ontario and Monroe, and all we saw, as well as the replies to all our inquiries, lead us to the conclusion that the promise of a good wheat crop the coming harvest, has rarely been more favorable the first week in May, than at this time. Should the weather prove favorable hereafter, there is little doubt the yield per acre will fully equal the unusually good crop of last year, while the breadth sown last fall was much larger than for some years past. While riding over our friend Johnston's farm, near Geneva, he called our attention to a field of seventeen acres of Early May wheat, from seed which he received from a subscriber to the Country Gentleman in Missouri, in 1858. Judging from present appearances, it will ripen some days earlier than any other variety, and its yield prove highly satisfactory. Mr. Johnston was much pleased with it, and thinks it will prove a valuable acquisition to the wheat-growers of Western New-York.

The prospect for a good crop of fruit, especially peaches and pears, was never better.

With Mr. Johnston we called on his neighbor Mr. Robert J. Swan, who has, take it altogether, one of the best farms we have ever seen. It consists of over 300 acres—all of it the best of wheat land, with just enough slope to enable him to drain it to advantage, and all lying in full view from the residence. It is improved in the best manner, the whole being thoroughly underdrained, and the fields enclosed with post and board fences. We much regretted that our time was too limited to permit us to accept Mr. J.'s kind invitation to ride with him to the farm of Mr. H. T. E. Foster, a few miles farther up the lake, where we were assured we should have been as highly gratified as with those we had already visited.

At Geneva we visited White Springs Farm, the residence of Mr. James O. Sheldon, where a couple of hours where occupied in the examination of his magnificent herd of Short-Horn cattle, which, notwithstanding the short period he has been engaged in breeding, is already taking rank among the best and most extensive herds of pure bred cattle in this country. We were gratified to learn that he proposes to exhibit a goodly number of them at the next State Fair, at Elmira, and among them a number of young animals which reflect great credit on his own skill as a breeder.

At Rochester we spent a day in visiting a number of the extensive Nursery establishments in and around that city, which we found in a most prosperous condition, the demand, notwithstanding the great competition throughout the country, having exceeded that of any previous year. No one branch of business has added more to the growth and prosperity of the rapidly improving city of Rochester, than this, which is carried on to an extent far greater than in any other single district of the country.

The spring thus far, at the west as well as here, has been unusually dry, and rain is very much needed at present.

Rapid Gain.—In Mr. Johnston's yard, we saw the fat heifer and steer alluded to by Mr. Johnston in his letter published in the Co. Gent. of April 19. The day he was three years old, the steer weighed 1,897¼ lbs. Mr. J. weighed a pair of steers on the 12th of May, 1859—they were kept on pasture only through the summer, and then fed until the 6th of April, when they were weighed again, and showed a gain of 1,516 lbs. in ten months and twenty-four days. Can any of our readers show a greater increase in the same period?

☞ A Canadian correspondent states that the Parliamentary Committee on Agriculture are to propose "great modifications in the construction of the Board of Agriculture." The members of the Board are now elected by the County Agricultural Societies. "Under the bill to be introduced, it is proposed to divide Upper Canada into twelve districts, which will comprise about two of the electoral divisions, for each of which a member shall be elected to the Board, and it is proposed that the township societies as well as the one-half of the county members of the Board are to retire every other year. The Board likewise to have the management of the annual exhibitions."

New Editions.—New and uniform editions on larger and still heavier paper, have just been issued by Crosby, Nichols, Lee & Co., Boston, of "Milch Cows and Dairy Farming," and "Grasses and Forage Plants"—two books which we have heretofore liberally commended—by Charles L. Flint, Secretary of the Mass. Board of Agriculture. The publishers will accept our thanks for copies, which with regard to mechanical execution, are certainly all that can be desired. The new edition of the Dairy book moreover contains the latest news on the *pleuro-pneumonia*, some new cuts, a frontispiece, &c.

Bone Dust and Swede Turnips.—We make the following extract from a letter under date of April 20, received by Mr. Coulson of this city, from T. L. Harison, Esq., of St. Lawrence Co.:—"By the use of the bone dust, purchased of you last season, I was for the first time enabled to get my Swedes started ahead of the fly, and succeeded, notwithstanding the very unfavorable season, in raising over 3000 bushels sound ruta bagas, from four acres of land. I composted the bone dust with hen manure and muck, in the proportions of 1, 2 and 4, (one of hen manure, two of bone dust, and four of muck,) and applied this compost on the first drill furrow over the barn-yard manure, covering it with the second drill furrow, substantially as described by a writer in a late number of the Country Gentleman."

☞ We regret to learn the death on the 21st March of Mons. Louis Vilmorin, senior partner of the well-known nursery and seed firm, Vilmorin, Andrieux, & Co., of Paris. Obituary notices in the foreign journals speak of him as personally amiable in disposition and munificent in his charities, while he numbered among his friends many of the first men of science in France; the horticultural world "loses in him one of its most enlightened, scientific, and energetic members," and one of the representatives of a family who have for more than a century devoted themselves to the study and advancement of this branch of rural science.

Terraculture.—Russell Comstock of New-York, asked the House of Representatives to publish his "admitted discoveries of laws in vegetation." Mr. Whitely denounced it as "the most unmitigated humbug ever introduced to the decision of Congress," and the resolution was not received. So says the U. S. Ag. Society's Journal. Our readers will note that at least one symptom of intelligence and common sense marks the present session of our National Legislature.

☞ The crops last year in Ireland were not good, but we were scarcely prepared to anticipate so large a deficiency as is reported in the following estimate from the *Irish Farmer's Gazette.* "The total money value of the decrease in crops, last year, in Ireland, as compared with the previous year, amounts to £4,693,638; and if we add to this the balance against us in the article of imports in 1859, as shown in our impression of the 24th ult., amounting to £1,424,892, it follows that the agricultural purse of Ireland exhibited a deficit last year of at least no less than £6,118,530."

☞ Another paroxysm of successful steam plowing at the west is chronicled, but one which, according to a Chicago contemporary, has accomplished more than merely turning a furrow or two in a trial field. It is Water's Machine, which is now "triumphant," and, divesting the "triumph" of superfluous exclamation points and descriptive touches, the facts of the case seem to be these: Mr.

Waters is a Detroit man, who exhibited at the last U. S. Fair at Chicago, where unfortunately his machinery broke down; he has been modifying and improving during the winter; this spring he goes to work in earnest. During the last week in April he was engaged in Grundy county, and the writer in the Prairie Farmer had seen about seventy acres of the steam plowing, and says that Waters is engaged "in a large job of prairie breaking, for which he is paid by the acre." A gang of six plows was used, "cutting a furrow nine feet wide." During the day previous, twelve acres had been the extent of surface gone over.

The plows had been put to some very severe tests in a field full of small oak and hickory stumps or "grubs." These were cut off without injury to the plows, and apparently without effect upon the engine. We measured one of these hickory roots which had been cut through; its diameter was 4¼ inches.

As the machine is now arranged, it requires one and a half cords of wood, a hand and team to supply fuel and water, (the water in this case being a half mile away,) a fireman, two men to manage the plows, besides Mr. Waters—to which add oil, &c., and Mr. W. says the cost to him is less than $9 per day.

THE WINTER IN SCOTLAND.—Extract of a private letter to one of the Editors of the COUNTRY GENTLEMAN, from a gentleman in Scotland, dated Portobello, April 26, 1860:

We have had one of the longest winters this year that ever has been experienced in Scotland. Since the end of October we have had storms of rain and snow almost every week. The snow never lays long on the lower grounds, and here we have never had more than three to four inches at a time on the surface. On the hills, however, it has been very different, for often when it was rain on the low country, it was snow on them. Many of the higher hills throughout the country you passed in autumn, are still thickly covered with snow. Unlike the wooded mountains of New-England, the Highlands are destitute of of trees, and the winds sweep over them in all their fury, and raise the snow, and accumulate it in great masses in the sheltered hollows. These masses will not disappear this year until the summer is ended. In many parts the sheep have suffered greatly, as there is usually no provision made for them, but what they gather on the mountains among the heather and benty grasses. Some farmers in the depths of the Highlands have lost thousands. The sheep on my farm have suffered comparatively little, as it is on the borders of the low country, and the snow soon disappears from the highest grounds. As you are aware, the turnip crop was a very poor one last year, and the arable land farmer was never worse off for keep for his animals, which have been fed at an enormous expense. Those who have been able to keep on, are getting very high prices. I believe fat sheep were never higher than they were yesterday in the Edinboro' market. As high as one shilling a pound was given for fat sheep yesterday. Wheat is still relatively lower than any other article of food. I would not wonder, however, although it took a start before long, as the spring being so very backward must begin soon to affect prices. Good hay is now as high as £7 a ton, and it is scarcely to be had. There was a good crop of it in Holland last year, and to show you how needy we have been, about 10,000 tons of meadow hay have been imported into Leith from that country. The selling price at Leith is £5.10.

LIQUID MANURE.—A correspondent of the COUNTRY GENTLEMAN, writes to this paper as follows:

"A few years ago I was induced to build a sink and reservoir in the corner of my garden, to receive all the slops, suds, &c., of the house, which had been previously thrown away, and well nigh wasted. Into this reservoir I threw occasionally a few shovelfuls of hen droppings, and during the season of growth employed the liquid as it collected, in watering my garden, by means of a can and a large syringe. An application of this kind was made almost every evening, and the luxuriant growth of the plants of all kinds was truly astonishing. The remarkable results obtained by this mode of irrigating and manuring my garden, induced me to build another reservoir, get a small engine like that used by firemen, and extend the practice to my lawn, orchard and calf pasture. The increase in my crops of grass, &c., &c., has abundantly remunerated me, and I do think that if some one should invent an easy method of carrying liquid manure all over our farms, he would be one of the greatest benefactors of his age and country."

☞ A New-England newspaper publishes incidentally, a suggestion to which we wish the attention of the Agricultural public might be promptly and earnestly called, in every part of the country. It is this: the DECENNIAL CENSUS of the United States is soon to be taken; the labor is entered upon in June, and every Farmer will then be called to communicate various facts in relation to his pursuit, upon the accuracy of which—so far as exactness is attainable—their whole interest and value depend. June is with him a season when the call of the Census-taker may surprise him in the midst of pressing occupations; and if he endeavors to supply on a moment's notice the returns required, how much of what he is asked will remain unanswered—how much of what he answers will be mere guess-work, or at best no more than a tolerable estimate.

We have just obtained from Washington a transcript of the headings which are required to be filled out, together with the accompanying instructions. The produce of small lots owned or worked by those engaged mainly in other pursuits, it is not designed to include in this schedule. We condense the following particulars:

1. Name of owner, agent or manager of the farm or plantation.
2. Number of acres of improved land, pasture, meadow and arable, reclaimed from a state of nature and used for any purpose of production.
3. Acres of unimproved land—all that belongs to the farm and does not come under the last head, excluding marshes and ponds where larger than 10 acres.
4. The cash value of the whole farm, improved and unimproved.
5. Value of Farming Implements and Machinery, including wagons and tools.
6. Live Stock—total number of animals upon the farm, June 1, 1860.
7. Number of Horses, Asses and Mules.
8. Number of Milch Cows.
9. Number of Working Oxen.
10. All cattle one year old and over, not included in 7, 8 and 9.
11. Sheep—number one year old and over, June 1.
12. Swine, on June 1.
13. Aggregate Value of all live stock, whether included in above list or not.

Products within the year preceding June 1, whether sold or consumed, or still on hand:—Bushels of

14. Wheat—15. Rye—16. Indian Corn—17. Oats.
18. Number of pounds of Rice. 19. Ditto of Tobacco.
20. Number of bales of 400 lbs. of Ginned Cotton.
21. Number of pounds of Wool.
22. Peas and Beans—23. Irish Potatoes—24. Sweet do.—25. Barley—26. Buckwheat—all in bushels.
27. Value of Orchard Products in dollars, and 28. Gallons of wine produced.
29. Value of Products of Market Gardens, including Nurseries.
30. Butter, and 31. Cheese in pounds.
32. Hay in tons—33, Clover Seed, and 34, Grass Seed—bushels of both cleaned for use or for market.
33. Hops in pounds—34. Dew-Rotted, and 35, Water-Rotted Hemp—36. Hemp otherwise prepared, all in tons.
37. Flax in lbs.—38. Flax Seed in bushels—39. Silk Cocoons in lbs.
40. Maple-sugar in pounds—41. Cane-sugar in hhds. of 1,000 lbs.
42. Molasses in gallons—specified whether maple, sorghum or cane.
43. Beeswax, and 44, Honey, both in pounds.
45. Value of Home Manufactures, whether for use or sale—less the value of the raw material, where the latter was purchased instead of being the produce of the farm.
46. Value of all animals slaughtered during the year preceding June 1.

In some cases these returns must be estimates, but the precise numbers, quantities or values should be stated wherever possible; the deputy who collects them "must use his discretion in assisting a farmer to estimate fairly and accurately the amount of his crops when he keeps no exact account, and in all instances it is desired to make the nearest approximate returns which the case will admit of."

We need only repeat the expression of our hope, that our readers at least will be fully "prepared for the census-man" when he shall come; to put off the matter until the time of his visit, will only subject him to delay on the one hand, and perhaps call the farmer, on the other, from some pressing task. It will be strange indeed in that case, if neither of the two parties is too impatient to wait the hunting up of exact figures, or the careful estimate of those which cannot otherwise be ascertained.

NEW-YORK STATE AG. COLLEGE.—An adjourned meeting of the Trustees of the Agricultural College was held at the College Farm House in Ovid, on the 3d inst. The Trustees present were Ex-Gov. King, Hon. William Kelly, Hon. B. P. Johnson, Dr. A. Thompson, Hon. B. N. Huntington, Hon. J. B. Williams, Edward G. Faile, Major M. R. Patrick, James O. Sheldon, and Arad Joy. The principal object of the meeting was the reorganization of the various committees—some of them on the Building Committee being now useless,—and to provide means for the successful completion of what has already been so well begun.

The committees were appointed as follows:

Executive Committee—Major M. R. Patrick, James O. Sheldon and B. N. Huntington.

Finance Committee—William Kelly, Edward G. Faile and B. N. Huntington.

Josiah B. Williams and Arad Joy were appointed a Committee to examine and calculate measurements and cost of College edifice according to contract.

The meeting afforded ample encouragement that the State Agricultural College of New-York will soon be a reality—a growing institution for the development of the agricultural resources of this State.

☞ The New Castle County, Delaware, Agricultural Society, owing to the efforts of some active and public spirited members, has been in the past, we believe, a well supported and flourishing fraternity; and, from a Circular —for a copy of which we are indebted to our correspondent Dr. Norris—we learn that it is now proposed to place it upon a still wider and more permanent basis. A subscription in shares of $10, is started for the purpose of purchasing grounds—a farm of 150 acres being obtainable within a mile of the city of Wilmington, at a reasonable price. It is designed to erect suitable buildings, &c.; to lease the land when not in use for exhibition purposes; perhaps to devote it partially to experimental culture; while, moreover another advantage from the possession of so large an area, besides the control of sufficient ground for testing the relative merits of improved machinery, &c., arises from constantly having a responsible man in charge, to receive and care for stock and machinery, at moderate charges, where it suited exhibitors to forward them before the opening of the exhibitions. We wish our friends all success in this excellent undertaking.

Nebraska Agricultural Society.—At the second annual meeting of the Territorial Board of Agriculture, the following officers were elected:

President—Hon. R. W. Furnas.
Secretary—A. D. Jones.
Treasurer—E. H. Chaplain.
Board of Managers—A. D. Jones, E. H. Chaplain, J. T. Griffin, A. F. Munger, and Dr. T. Boykin.

The next Fair is to be held at the city of Omaha, September 19th, 20th and 21st.

☞ The Annual Election of Managers of the Chester Co. (Pa.) Agricultural Society, has resulted as follows:—

President—Isaac W. Vanleer.
Vice Presidents—M. B. Hickman, Joseph Dowdall, Dr. J. K. Eshleman, Col. Sam'l Ringwalt.
Corresponding Secretary and Treasurer—J. Lacy Darlington.
Recording Secretary—Wm. D. Sugar and J. Bayard Jefferis.
Executive Committee—Lewis Sharpless, Thos. S. Woodward, Chas. W. Roberts, Thos. W. Cheyney, Wm. Chalfant, Wellington Hickman, Lewis P. Hoopes, John Hannum, Nathan Garret, Wm. Gibbons.

Chenango Co. Ag. Society.—Mr. John Shattuck, Oxford, has our thanks for the Transactions of this Society for 1859—a handsome pamphlet of 52 pages, including the Address of Hon. D. S. Dickinson at its last Fair, list of prizes awarded, &c. We shall copy from it, the statement of Mr. Shattuck on which he received the first prize of $25 for the best dairy farm.

☞ We are indebted to Henry Keeler, Esq., President of the Westchester Co. Ag. and Hort. Society, for the Prize List for its next Fair, which is to be held at Mount Kisco, Sept. 25, 26 and 27. Addresses are to be delivered on the 26th, by Robert Cochran, and on the 27th, by Horace Greeley.

☞ The Virginia State Agricultural and the Virginia Central Agricultural Societies have combined, and will hold their Fair for the present year upon the grounds of the Central Society, commencing on Monday, the 22d of October, and continuing six days.

☞ The Wisconsin State Fair is to be held this year and next at Madison, the citizens of that place having raised by subscription the amount required by the Executive Board to induce them to locate it there for the next two years.

☞ The Baltimore Rural Register contains the result of a sale of Live Stock belonging to J. H. McHenry, Esq., which took place Ap. 16. Seven head of Devon cattle, and twenty-one of Alderneys were offered. One of the former, a cow 8 years old, was sold for $102.50, to P. T. Woodward, Esq., Saluda, Va., and a Devon bull, 18 mos. old, was sold to A. P. Rowe of Fredericksburg, for $50. Of the Alderneys, ten cows were sold at an average of $83.75 per head—the highest going for $140; one heifer was sold for $130, and another for $95, and a young bull went for $53.

Several lots of Suffolk swine were disposed of. Fifteen horses were offered, four of which did not find purchasers, but the results of the sale as a whole, are said to have been satisfactory to Mr. McH.

☞ It is stated in the "Spirit of the Times" that Hon. John G. Meems of Lynchburg, Va., has purchased of S. Leland, Esq., of Westchester Co., a Short-Horn bull called "Farnley," bred by the latter gentleman, at the price of $2,500. "The estates of Mr. Meems, including those of his son, Gen. Gilbert S. Meems, are the finest on the banks of the Shenandoah river, in the valley of Virginia, and jointly include over 5,000 broad acres in the highest cultivation. Upon this lordly expanse graze over seven hundred head of cattle and horses, everything appertaining to this princely establishment being upon the most comprehensive scale."

Sale of Ayreshire Cattle.—A sale of Ayreshire cattle, says the Boston Cultivator, belonging to the Massachusetts Society for Promoting Agriculture, took place on the 9th of May. The cows and heifers brought an average of $98.50—the four-year-old bull $115, and the two-year-old $85—the bull calf $52.50, and the heifer calf $40. These prices, although very low, are perhaps all that could have been expected, considering that the animals are not allowed to leave the State, and the depression in cattle-enterprise from the excitement in regard to pleuro-pneumonia.

☞ By an Advertisement in another column it will be seen that a sale of Valuable Stock, probably the first in an annual series, is announced at Waldberg, the residence of Hon. A. B. Conger, Ex-president of the State Ag. Society. Mr. C.'s herds are widely known for extent and the care with which they have been formed, and this will be one of the most important sales of the season.

☞ We are informed that Gen. J. S. Goe, of Pennsylvania, has just sold to Messrs. E. G. Garnett and T. C. Graves, of Petra, Saline Co., Mo., 5 cows, 5 heifers, and a bull calf, all Short-Horns—also 1 pair of Essex swine, 52 Merino ewes, and 3 Merino bucks, and, in addition to the above, 4 mares, two of which were served, and one got by "Bush Messenger."

☞ Mr. Jonas Webb's ram letting is fixed for Thursday, July 5th.

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Fine Asparagus.—*Office of Glen Cove Farmers' Club, May* 17.—Messrs. Editors—We hand you by express to-day, a bunch of asparagus raised by Peter Cook, one of the members of our club, and sent by the club to you. The season being dry and cool, we shall not cut anything like the usual amount this year. We sent from our landing on one day this week, per steamer Long Island, nineteen hundred and eighty-five bunches of asparagus—the amount would probably have been at least 2,500 the same time, with a favorable season. R. M. Bowne, *Secretary.* [We are much obliged for this specimen of what Long Island can do in the way of asparagus raising. It is a bunch of 23 shoots, and weighs *three and a half pounds!* Our correspondent adds that 12 or 15 farmers of his neighborhood have been recently devoting considerable attention to the crop, and we shall be under farther obligations if he will communicate for our columns the further statements and details to which he alludes. Eds. Co. Gent.]

Pear Culture.—At a recent meeting of the Skaneateles Farmer's Club, it was stated that the Hon. George Geddes, of Onondaga, was engaged in planting a pear orchard of about four thousand trees.

[For the Country Gentleman and Cultivator.]

THE CATTLE DISEASE.

The pleuro-pneumonia now prevalent in Massachusetts has spread much beyond what was anticipated a week or two since. The passion for trading, dickering, buying and selling, seems to have been greatly increased among those whose cattle were diseased, and thus have infected animals been diffused into various parts of the commonwealth; also by teaming with infected oxen. Where this calamity is to end, it is not now easy to predict. There should be the greatest vigilance exercised to prevent its crossing the Connecticut river.

Every town should take active measures to prevent any animals from infected regions being brought into their limits—and not to allow teams from such regions to pass through them. This has already been done in some towns. Meetings are called in various towns to consider the subject. The people are really waking up to their danger. This should have been done months ago. Instead of that, the disease was suffered to rage on Mr. Chenery's farm under the treatment of one or more veterinary surgeons, and Mr. C. was not informed that it is a contagious disease until he had suffered from it about three months. Of such astounding stupidity, be it spoken reverently, Good Lord, deliver other Commonwealths.

Had the veterinarian, as in the late case in Melbourne, Australia, where a farmer imported the disease from England, as was done in this country from Holland, pronounced it pleuro-pneumonia, and called a meeting as was done there, and devised measures for the immediate extermination of the infected herd, he would have honored the profession and saved the Commonwealth $100,000. But the history is too well known to require further consideration now. The question for to-day is not what might have been done, but can be done for the immediate extermination of this cattle scourge.

The Secretary of the Board of Agriculture has been ordered to inform all the Governors of the States and Territories of the Union, Boards of Agriculture, and Presidents of State Societies of the nature and character of the disease, that they may take such measures as they may deem necessary to protect themselves from this impending calamity now threatening the great cattle interest of this nation. It is hoped they will act wisely but firmly in the matter.

The Commissioners have invited the Connecticut Legislature now in session in New Haven, to lay the subject before them. While there Mr. Amasa Walker met the Rev. Mr. Lindsey, a Missionary of the American Board of Commissioners for Foreign Missions, who for seven years resided at Port Natal on the eastern coast of Africa. From a conversation with this gentleman, whose position and opportunities for observation entitle him to public confidence, Mr. Walker was fully convinced that the commissioners had taken the only course open to a complete extinction of the disease. Mr. Lindsey states that five years before he left Africa, which was several years ago, a bull, affected with pleuro-pneumonia, was imported into Port Natal from Holland. In sixty days after arrival it died. The disease was communicated to other cattle, and spread rapidly in all directions, jumping 300 miles at one time, in consequence of one of the tribe in the infected district driving a herd of cattle that distance. The disease extended along the entire coast, a distance of 1300 miles, sweeping all the cattle before it.

The cattle belonging to the tribe in which Mr. Lindsey dwelt, were, however, exempt from the infection, not a single case occurring, and for this reason: The chief of the tribe, impressed with the belief that the only remedy was in isolating his people and their herds, and cutting off all communication by means of cattle with the surrounding tribes, forbade the introduction of all cattle into his domains. He cleared a belt of land about 300 rods wide, entirely around his kingdom, and this, by agreement with the surrounding chiefs, was regarded as neutral ground. No cattle were allowed to cross it, but, in the process of transportation, goods were drawn to the line of demarkation on one side by cattle, then carried across the belt by the natives, and taken up again by oxen in the adjoining territory. The result of this judicious action was that not an animal died of the disease in that tribe. While beyond the belt, cattle could be seen dying upon the hills, and within it there was perfect security. Mr. Lindsey strongly asserts that the disease cannot be compromised; that it is a *contagious consumption*, which is incapable of modification. It is the same in Africa as it is in Holland, and it will be the same in the United States, unless it is eradicated. It has obtained a foothold in this country, and unless some speedy and effective plan is adopted, it will overrun the States.

A petition for calling an extra session of the Legislature has been prepared by the commissioners after due deliberation, in order, if possible, to derive means and make an appropriation ample to complete the work of extermination.

There are well authenticated cases of the disease having been communicated by the clothing of those visiting the infected cattle, to healthful cattle, and yet there are croakers in every slough of ignorance, proclaiming vocally, and through such papers as they can, that pleuro-pneumonia is neither contagious nor infectious—whereas it is undoubtedly both—judging from the testimony of experience and observation. George. *Eastern Massachusetts, May* 19.

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[For the Country Gentleman and Cultivator.]

TURNING STOCK TO GRASS EARLY.

Messrs. Editors—It may do for Mr. Van Leer, (see Co. Gent., p. 268,) to turn out his stock as soon as his grass starts when he sends them to market on or before the 15th of July. Were he to keep them over until November, he would talk differently no doubt; but I do not understand what kind of grass he has, that his cattle will only eat it when first turned out in spring. Cattle and sheep eat the grass on my lowest land at any season of the year, as well as that on the upland. If his lowland is wet so that they wont eat it only when they first get to grass, I guess it will do them no more good than those raw potatoes will do the sailors, that he says they will eat when confined to salt meat for a long time. Surely the gentleman dont mean to infer that they will fat the men, neither will grass growing out of water fat cattle.

Mr. V. L. says he has fatted cattle for over 30 years. That is not enough to make him perfect, if he always follows the same course. I have fed both sheep and cattle over 50 years, and I am still learning. I think I have made some valuable discoveries in the last seven years; but more than 50 years ago I knew that grass growing in low land, with water at the roots, was poison for sheep, and while it might keep cattle alive for a month in spring, it would not improve their condition any more than *raw potatoes* would sailors, as I presume the stomachs of sailors are like other men's. John Johnston.

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Irrigation.—I would advise all your readers to "wash" their low lands where there is a chance. A neighbor of mine has turned a brook on a rocky defile, and now he cuts several tons of hay from on top of where those large rocks lay. In the spring of the year many loads of valuable manure and fertilizing matter are washed off of our land because we don't dam and throw the water where we should. The amount of fertilizing matter annually washed away by small brooks is immense. We can save much of this matter by a system of dams and ditches so as gradually to let the water off, leaving the debris on the surface and in the pond holes. J. T. H.

Value of Oat Straw.—Mr. Burt, of Norway, N. Y., states in the Rural New-Yorker, that he was obliged last summer to cut his oats very green, on account of the grasshoppers. From eight acres, yielding 300 bushels, he kept eighteen head of cattle two months on the straw alone, without grain, and kept them well.

NOVELTIES! NOVELTIES!! NOVELTIES!!!

WINTER WATER MELON—28 cents by mail.
SOUTH AMERICAN SQUASH, (very fine,) 28 cents by mail.
OHIO IMPROVED TOBACCO, (very gigantic)—28 cents by mail.
BRADFORD WATER MELON, (fine)—28 cents by mail.
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THE TRUE HUBBARD SQUASH, (Gregory seed.) 29 cents by mail.

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NOTICE TO FRUIT GROWERS.

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HARRY E. PEASE, Lithographic Engraver and Painter,
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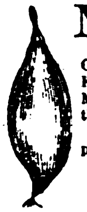
NEW MOWING MACHINE
UNITED STATES.

HALLENBECK'S PATENT,

As it appears when Folded up for Moving about the Farm.

The subscribers having completed the most perfect Mower ever offered to the public, are prepared to fill all orders which may be sent to them. A few of these Machines were built the past season to test their merits, and in every instance giving entire satisfaction, and taking the preference over all others wherever it came in competition; invariably taking the first premium at every fair last fall where premiums were given. For description address the subscribers, when Circulars will be sent free of charge. Manufactured by

HALLENBECK & CUNNINGHAM,
June 1—m1t. Corner of Philip & Johnson sts., Albany N. Y.



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Circular of directions in culture, and experience of our patrons, sent for a stamp. C. B. MURRAY,
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got by imported Bull "Squire Gwynne II," 1101, out of "Filipall IV." &c., &c., both from Thorne's herd. See American Herd Book.

The subscriber offers him for sale on very reasonable terms, having another Bull not so nearly connected to his stock.

Any one wishing to purchase may, for pedigree or further particulars, address A. M. UNDERHILL,
Ap 5—w3tm2t Clinton Corners, Duchess co., N. Y.

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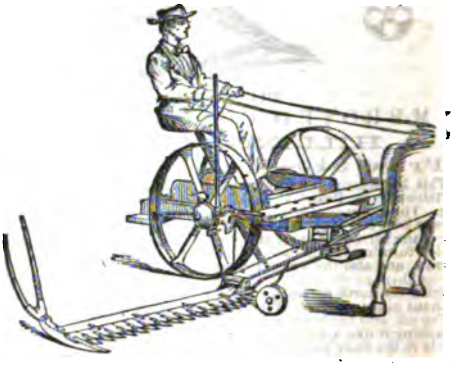
WITH FLEXIBLE FOLDING BAR.

The farmer intending to purchase a Mower, will find it to his advantage to examine the Buckeye for 1860, which combines all those features which have given it its present reputation, that of

THE BEST MOWING MACHINE IN THE WORLD.

together with several important improvements added the present season.



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The machine is supported on two driving wheels, which act together or separately, keeping the knives in motion in turning either to the right or left.

The cutter bar is attached to the frame by a DOUBLE HINGE JOINT, which allows either end to rise or fall without affecting the other, adapting itself to all inequalities of the surface, and also adding greatly to the strength of the machine.

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The greatest care will be taken in the selection of material, and the construction of the Machine, and the Buckeye of 1860 will present more claims than ever before, to the consideration of the farmer wishing to secure the best Mowing Machine.

Orders must be sent early to Secure Machines. My unfilled orders of last season amounted to several hundred. Descriptive Circular, with testimonials, forwarded by mail.

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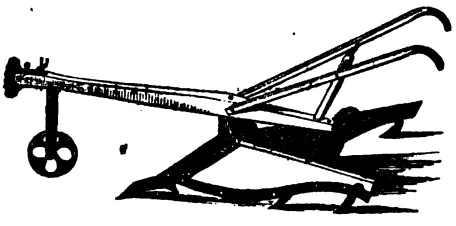

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IMPROVED CULTIVATING AND HILLING MACHINE.

Price $10—Weight 80 Pounds.

This Implement is recommended for Cultivating and hoeing Corn, Potatoes, Peas, Beans, Cotton, and any other crop that requires hoeing. The wings contract and expand to suit any width of rows. It passes between the rows, the share shaving the weeds from the center of the furrow, shoving them outward until they come to the teeth, which turn inward on each side and turn them back again into the furrow, and also the weeds that grow on the sides of the furrow, and buries them so deep that no ordinary shower will wash them out—leaving the earth perfectly mellow; and it can run close to the plants without injuring them. When the plants require hilling, the teeth are taken off, and the wings shove the earth up under the plants, instead of rolling it like a double mold plow and covering them up, and the circle in the back part of the wings shapes the hills. For further information apply to W. W. EGGLESTON,
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CIDER MILLS AND PRESS.
CORN SHELLERS, various kinds.
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They are so improved as to be taken down and packed in boxes for transportation. One dozen can be packed in a box of about six cubic feet. We also make the Grapevine Cradle. All of the above are made of the best material and workmanship. For Price List, address
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They will chaff and screen wheat in passing through the mill once, in the most perfect manner, and all kinds of grain and seed. Warranted the very best in use.

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The success of this Mower during the past harvest is without a parallel in the history of Mowing Machines. In introducing it, I offered to the farmers a mower at a less price than any in use, one that was light, durable, and capable of doing perfect work. It has performed more than I claimed for it; the reduction in price and draft is equal to 25 per cent., as the trials and tests show, (see my pamphlets for 1860.) I have added some improvements to it for this year—a lever arrangement for raising the cutter-bar, some of the parts are strengthened, and the driving-wheels are enlarged.

I continue to manufacture, as heretofore, Manny's celebrated Combined Reaper and Mower; with Wood's Improvement, this machine fully maintains its reputation as the best Combined Reaper and Mower yet introduced, and inferior to none as a Reaper or Mower.

I have added to this machine a Self-Raking attachment of my own invention, the most simple in its structure and mode of operation of anything of the kind ever offered to the public.

Price of two-horse Mower, delivered here on the cars,				....	$80
one-horse	do.	do.	do.	do.	70
Combined Machine,	do.	do.	do.	....	120
Do.	with Self-Raking Attachment,			.....	140

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Ap. 26—w10t Hoosick Falls, N. Y.

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THE BUCK-EYE MOWER,
KETCHUM'S MOWER,
KETCHUM'S IMPROVED REAPER AND MOWER, and
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Albany, Jan. 1—w&mtf. L. TUCKER & SON.

GEO. F. CURWEN, WEST HAVERFORD, Delaware County, Pa., Breeder of DEVON CATTLE and ESSEX HOGS. Feb. 9—w13t

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GRAPES IN POTS DURING SUMMER.

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May 24—w3tm1t

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May 24—w4t—June 1—m1t.

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Mar 1—w&m3ms

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Mar 8—w15t

THE CULTIVATOR.

THIRD] TO IMPROVE THE SOIL AND THE MIND. [SERIES.

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"THE COUNTRY GENTLEMAN," a weekly Agricultural Journal of 16 quarto pages, making two vols. yearly of 416 pages, at $2.00 per year, is issued by the same publishers.

No. XXXII—Farther Glimpses of Norfolk.

If there was any where an excuse for prolixity or repetition in these notes, it might perhaps exist with reference to the agriculture of a County in which such results are obtained as those we have already seen crowning the labors of the farmers of Norfolk.

The last stage reached in the course of this narrative left me at Elmham, not quite an hour and a half by rail, northwest from the city of Norwich,—where, notwithstanding what I have just written, I think there will be room enough for quite an outline, without retracing our steps over any of the ground already traversed.

The home farm of Lord SONDES, cultivated under the management of Mr. FULCHER, consists of about 800 acres. It may be remembered that Nos. 16 and 17 in this series, contained some account of the estates of the same nobleman in the county of Kent, where the property is in the hands of tenants. Here at Elmham, the establishment includes quite extensive "preserves," where pheasants and partridges are not only protected, but, as we shall presently see, actually bred and cared for at considerable expense and pains; and I understood that the proprietor, with a kind of generosity not always found in the land-owners of England, had retained for his own farming, most, if not all the land by the cover-side, renting only those farms that are thus least exposed to ravages from the sportsman's pets.

A Breeding Herd of Suffolk Polled Cattle.

Prominent among the objects of interest to me were the red polled cattle, to which I have before alluded, and which are here bred with more than usual care. The counties of Suffolk and Norfolk both appear to claim the privilege of godfather to the breed, but as I have already spoken of them under the former name, it may be as well to continue it.* It should be remarked however, that Martin ascribes the remoter origin of the breed to the Galloways introduced into these counties for feeding purposes, but modified by crossings and interbreedings, until "their chief qualifications are as milkers, rather than feeders; although, in this latter respect, even the lean cows when dried show no little of the properties of their Galloway progenitors."

Norfolk was in fact formerly quite a dairy county. Mr. Fulcher spoke of the important rank which butter once occupied there as a farm product. But circumstances have combined to "change all this;" feeding has wholly usurped dairying, and, as a consequence, other breeds have somewhat thrown into the shade one, which, as it seems to me, would be—wherever milk as well as beef is an important object—quite as well worth the trial as any which we have yet obtained from the British Islands.

To sustain this opinion, which I first formed from what I saw and heard of the stock at the Suffolk Show at Ipswich, and at one of the farms in that county to which Mr. Crisp kindly accompanied me, I should add that, according to Mr. Fulcher's statements, the cows of this breed will continue in milk eleven months out of the twelve, giving from four to six gallons per day when fresh. Martin quotes two writers, one of whom estimates 168 lbs. of butter, and the other 184 lbs. as the fair annual yield of one cow in a year, and adds that an average between the two statements is probably not far from the truth. Mr. Fulcher moreover remarked, that a bullock would weigh from 6 to 7 cwt. at two years old, when fed for the butcher, and often more; when he could spare any from his Suffolk herd for feeding, he could put them up to graze at the age mentioned and sell them at two and a half, when he could obtain "a penny a pound" (2 cents) more for the beef than for that of a pure Short-Horn. If I do not misinterpret a further memorandum partly obliterated, he mentioned having slaughtered these bullocks at 50 stone, (720 lbs.,) and Martin has the following paragraph: "When dried, the Suffolk polled cow acquires a good condition with considerable rapidity, and fattens to forty or *forty-five stones;* the meat is of good quality—that, indeed, of the ox *very superior.*"

The herd of Suffolks at Elmham was a breeding herd, and several of the animals were so fine that I should much like to have procured an accurate drawing of them for publication, while as there is nothing of the "fancy" in the prices at which they are held, if any friend had commissioned me to select for him some kind of cattle that would be both novel and serviceable on this side of the water, I think a young thing or two from Lord Sondes' establishment would have certainly had an invitation to America.

---

*I am the more inclined to style this breed the "Suffolk polled" instead of the "Norfolk," because I find in the interesting survey of Norfolk Agriculture by Nathaniel Kent,—a copy of which, printed in 1796, is now before me,—that the author speaks particularly of the "introduction" of the "SUFFOLK polled cow" as then becoming quite general; he styles it "certainly more profitable" than the previous stock of the country, and says that since its introduction "from Suffolk" the credit of "home-bred" animals "is much increased."

Stock for Feeding—The Sheep.

There were about a hundred head of cattle on the place, and nearly 1,200 sheep. Some of the Norfolk farmers, mainly those on the light lands, keep breeding flocks, and produce lambs—principally, as I have stated in speaking of Suffolk farming, from the Suffolk black-faced ewe as the female parent, with a Leicester sire. The breeders dispose of the lambs at Norwich market, or in other ways, when from four to five months old, at from $5 to $7.50 per head, according to their quality and the state of the market. The best of them, fed during the winter, sell the April or May after they are one year old, for from $12.50 to $15—having been clipped first, occasionally as early as Feb. 15th, so that part of the price named is for the wool aside from the sheep itself. The preceding spring, for example, I understood that Mr. F.'s sheep sheared 10 lbs., which at the price there paid for the wool, about 36 cents per lb., would diminish the butcher's price for the fat sheep some $3.50 upon the above figures.

If for wool and all, as above stated, the sheep are made to net the feeder $7.50 per head above their cost, it was estimated that two-thirds of this sum would have been paid for the oil cake they had eaten, while out of the remaining $2.50 is to come the attendance and provender they have also cost. This goes to show that Mr. Reed was not incorrect in calling it "an expensive style of agriculture" which one finds in Norfolk.

The custom in buying bullocks, I was told, was for the feeder to pay in the neighborhood of $1 (4*s.* to 4*s.* 6*d.*) per stone (14 lbs.) for the estimated weight the "beast" will attain when ready for market, and my informant added that if the price obtained by the feeder on selling reached 8*s.* per stone, the gain was scarcely enough to pay the cost of feeding, which may be estimated at from 8*s.* to 10*s.* per head per week—the cattle being bought toward the latter end of October, in tolerably good condition, and fed, say six months, at the rate of say seven pounds per day of oil cake, not infrequently receiving much more than this amount.

It was to the South Down letting of Mr. Webb that I was indebted for the acquaintance of Mr. Fulcher. He had there hired the use of a tup for the season, paying for his services the sum of 35 guineas. This would add 5*s.* or 6*s.* ($1.25 to $1.50) to the cost of every lamb he would be likely to sire—but the expenditure was still thought an expedient and reasonable one.

Preparation for the Wheat Crop.

It is a general practice in this part of Norfolk, I was assured, to spread the "muck," as farm-yard manure is there termed, as soon as possible after haying, upon the clover ley, where it remains exposed until plowing in October; although contrary to received theory, this is regarded the best preparation for the crop of wheat, and if muck enough is made to provide half the wheat with a thorough dressing of the kind, the farmer considers himself fortunate. This statement agrees with that made in Mr. Read's essay; he says that "formerly all the manure that could be made on the farm was needed for turnips; now a great breadth of roots is grown with artificials, leaving a large portion of the farm manure to be applied for wheat. It is *placed on the ley-ground directly the hay is off*, or before the land is plowed for wheat in the autumn."

When there is not manure enough for the wheat, Mr. Fulcher said that the deficiency was made up by the application of about two cwt. of guano per acre plowed in on the clover stubble—the sward being turned in as heavy as possible. In the spring, wherever the wheat is not sufficiently luxuriant in appearance, about half a cwt. of nitrate of soda mixed with double this quantity of salt would be applied with a machine, for which purpose what is called "Chambers' broadcast distributor" stands in high esteem. Corroboratively, Mr. Read states that experience proves it more expedient to employ nitrate of soda than guano as a top-dressing, "for, while one takes no sort of harm from the cold dry winds, the other loses much of its virtue when so exposed."

Thirty to forty cubic yards of clay are applied to the light lands once in ten or twelve years, and without this application wheat could not there be made a profitable crop.

Other Regular or Occasional Crops.

It has been before mentioned that owing to the recent prevalence of decay in the turnip crop, the growth of mangolds in their stead is generally on the increase. Mr. F. thought that one-third the root crop of the county was now mangolds; according to the estimate made in 1854, already given, there was but about one-tenth the area in this root compared with that occupied by turnips, so that the change during five years becomes at once apparent. The mangolds, on account of the frost, have all to be dug and covered with earth; this labor is entered upon as soon as wheat sowing is over, and costs from 10*s.* to 15*s.* per acre. Moreover upon turnip land, the sheep are fed during the winter, receiving daily rations of oil cake, and to supply the place of this dressing which the land does not receive when mangolds are grown, it becomes necessary to sow in this case two cwt. of guano per acre as a preparation for the ensuing barley crop.

A bite for the sheep in May is often obtained by sowing upon the wheat stubbles four bushels per acre of rye as soon as possible after harvest. Here the sheep are folded at night during the month named, the result of which is beneficial to the roots which follow next in the regular order of the course.

It is already known that Norfolk farming has found, in the apparent repugnance of the land after a certain length of time to the production of clover, an almost insuperable obstacle. Mr. Fulcher was in the habit of sowing a peck each of clover seed and rye grass per acre, with 3 or 4 lbs. of white clover, so that if the first should fail, the second would give a crop, although wheat does not follow rye grass very kindly. Clover is also alternated with trefoil, so as to come but once in eight years, and, finding it an uncertain experiment even at this interval, it is becoming more and more common to introduce another alternation of sainfoin, "taken up at Michaelmas for wheat, just as clover would be," so that the same field is only sown to the latter once in twelve years, instead of four or eight as before. The sainfoin is *drilled* at the rate of three or four bushels of seed per acre, and is thus a more expensive crop to raise.

Salt is extensively applied as a manure for mangolds, most frequently together with guano, and benefits them both with regard to weight and quality. Mr. Reed thinks that on light lands in seasons of drouth, it appears to absorb moisture from the atmosphere, or aid in retaining that which the land already possesses. He speaks of the use of from 3 to 5 cwt. per acre.

Inroad upon the Gamekeeper's Domains.

Forsaking practical topics for awhile after punching the sides of the Suffolk cattle, my conductor drove me to see the wooded portion of the estate, which embraces perhaps 160 acres, yielding a regular crop of much importance in the husbandry of a county like Norfolk. It is mostly of *hazel*, of which about 20 acres are yearly cut over for *hurdle-making*, so that a crop of this sort is here produced about every eight years. The gamekeeper piloted us to an open space where there were between 30 and 40 coops of young pheasants, under the maternal care in all cases I believe of the ordinary domestic fowl. I was told that the keeper is paid 2s. (nearly 50 cents) apiece for all he raises, paying himself the cost of feeding, which is a large item for four or five hundred young birds with a good appetite. Immense numbers of boiled eggs are used, and this with barley and scraps constitute the chief items in their bill of fare.

The quantity of game, including under this head—beside pheasants—partridges, rabbits and hares, although the two latter are sometimes classed as "vermin" by those who suffer from their rapacity—fostered in such preserves, is immense. The numbers killed in the shooting season, too, are very great, and I was told that it is quite customary for landlords, after enjoying this sport with friends, and making presents of the other kinds of game they slaughter, to reserve the pheasants carefully for sale. They command from $1.25 to $1.50 per brace at market, and as they are bred by artificial means involving much expense, it is thought just and proper that they should be made, if possible, to pay their way wholly or partly—an arrangement of which previously I had no expectation, having always supposed the production of such birds to be entirely a matter of luxury and amusement, instead of one verging upon the character of any other business transaction.

Through the fields of tenants and others, it is quite common to see every dead furrow occupied with a drill or two of *buckwheat*. It is sown by the landlord, to furnish provision for the partridges, who are very fond of this grain.

As children, we have shuddered at the old English custom of gibbeting criminals in chains, associating every gloomy cross-road with the ghosts of highwaymen and murderers, and the clanking of horrid irons, swinging with their burden of lawless and outlawed humanity in every sudden breeze that rustled through the leaves. If happily these sights are no longer found in our day, criminals of another sort are still the subjects of a somewhat similar posthumous exhibition; every kind of winged or quadrupedal foe with which the gamekeeper has to contend, is hung upon some convenient tree, or elsewhere impaled as soon as shot, a testimony to his vigilance and prowess, as well as answering as a warning, it is to be hoped, to their marauding comrades.

The Allotment System.

Among numerous other points of interest, there is one to which I cannot forbear referring, even at the risk of rendering my chapter too long. What is termed the *Allotment system*—that is, the letting to laborers, or "cottage tenants," of small pieces of land for their own cultivation in out-of-work-hours—has been practiced extensively by Lord Sondes, and is an additional proof of his efforts to fulfil in the largest sense the duties of a proprietor and landlord.

It is scarcely necessary to argue at length the advantages which can but result from the occupancy by the working-man, of a tract of land where his own family may feel themselves at home, where the labors of all may be employed to good advantage, and where, when free from other obligations, he may usefully spend his own time *for himself*, instead of wasting it at the ale-house, or in that idleness which is perhaps equally as unfavorable to the good temper as Mr. Watts thought it to the morals of a family.

The only objection that I have heard urged to the application of this system to farm labor, is that, while it affords for mechanics occupied in-doors, in cities or villages, an agreeable change in air and in the kind of toil, to those employed in farm labor it is only a continuance of the same tasks, in the evening which should be a time of rest, at which they have been toiling all the day. This is true, in some measure, but is of little force, it seems to me, from the reason that a laborer with a family is supplied with the means of utilizing the time of young and old *at home*, instead of allowing his wife and children to work for others, while, unless in some particular times, the labor upon a quarter or half an acre can scarcely prove burdensome to him and them in comparison with the value of what it yields.

The latter (half an acre,) is the size of Lord Sondes' allotments, and his experience in the matter was such, I understood, as to warrant the highest commendation of the system. We saw certainly as flourishing crops upon these plots, as I anywhere found; the tenants pay promptly their rent, as an almost uniform rule; and, although there is always some opposition on the part of interested parties to the adoption of a plan involving such changes, it has now been in successful operation long enough here to test it pretty thoroughly. To show the kind of restriction under which these tenants lease their holdings, I have thought it worth the while to copy below the lease and covenants just as they are drawn up, for the privilege of presenting which, I am indebted, with other favors, to Mr. Fulcher's attention:

Terms and Conditions of Tenure under which the cottage tenants of the Right Hon. George John Lord Sondes, hold their respective occupations in the County of Norfolk.

The rent to be paid by four equal quarterly payments, (if demanded,) that is to say, on the Sixth day of January, the Sixth day of April, the Sixth day of July, and the Eleventh day of October in each year, and if not previously demanded, the whole rent due to be regularly paid on the Eleventh day of October.

The landlord reserves all marl, brickearth, gravel, sand and stones, fruit trees and bushes, (but not the fruit thereof,) and other trees growing on any of the fences, gardens, borders, and premises.

The tenant to cultivate the gardens in a good and husbandlike manner, also to clean and brush the hedges, and to keep both free from weeds, and the vegetables growing in the garden to be left at a fair valuation for the succeeding tenant.

The tenant not to under-let, or take in lodgers on any part of the premises.

Three months' notice in writing given by either landlord or tenant, on one of the above named quarter days, shall be a sufficient notice for the tenant to quit, and deliver up possession of the cottage, garden, and premises to the Landlord or his agent on the next quarter day following the receipt of such notice.

—— —— is this day, admitted tenant of the cottage, garden, and outhouses, called —— situated at ——

The rent of the above named holding be at the rate of —— pounds, —— shillings, —— pence a year, and to commence from the —— day of —— 18—

I hereby agree to pay the rent, and to perform the covenants and agreements hereinbefore reserved, and to quit and yield up possession of the occupation on receiving the notice herein agreed to.

Dated this —— day of —— 18—

COVENANT ANNEXED.

The occupation of the Allotment not to interfere with the weekly labor, but to cultivate at leisure hours, before or after the day's work of his master by whom employed; and on no account shall any labor be done on a Sunday.

The occupier to pay poor's and surveyor's rates.

If any occupier be convicted of felony, or offence against the laws of his country, he or she shall be immediately dispossessed of his or her occupation.

The occupier to farm and crop in such manner as may be most beneficial to himself, without taking two corn crops in succession; but the four-course system is recommended.

The portion of land where wheat shall have been grown, to be properly cleared of foul grass as soon as can conveniently be done, between the Michaelmas and Christmas day following.

Summer weeding, to prevent seeding, be strictly attended to.

The straw grown on allotment to be made into muck, and expended on the same; but on giving up the said allotment, the straw to be left thereon for the use of the landlord.

The rent of the said allotment to commence from the 11th October, 18—, at yearly payment of £—— with the addition of the aforesaid rates.

The said yearly rent and rates to be paid and cleared up on the 11th October in every year; and in case of default the land to be forfeited.

It will be seen that there are fewer restrictions and obligations than many English landlords would have thought necessary, but enough I was assured, to protect sufficiently the interest of the proprietor. I had made some further memoranda that might have served to complete the foregoing statement, but cannot now find them, and enough has perhaps been said to show the general working and design of the arrangements referred to. Upon the Norfolk estate of Lord Sondes, there are 160 allotments of a half acre each, let at the moderate rate of $3.00 per year for the land. The rent of the cottage is about £3 (say $15)—from 1*s*. per week, upwards. The carrot is quite a favorite crop on these allotments—Lord S. sometimes purchasing for his own use 1500 or 2000 bushels of them per year from his cottage tenants, at the rate of about 4*d* per bushel.

I am forced also to close for the present, with no more than a passing allusion to the pleasant grounds and fine gardens attached to the plain and substantial mansion which constitutes Lord Sondes' residence. It is not only here, moreover, that my obligations are heavy to the kindness of Mr. Fulcher, as now imperfectly acknowledged, but the columns of the Co. GENT. have before contained the record of a visit in the south of England, above alluded to, marked by similar courtesies on the part of his lordship and Mr. NEAME, the manager of the Kent estate.

FEEDING LEAN CATTLE FOR BEEF.

Conversing with "A Young Farmer," on the above subject, he asked us, "At what time in the year can one best and soonest fatten lean stock?" Having no very extended personal experience in the matter, we gave him the views of some who have long made it a business to supply butchers with fattened stock, and our own opinions as made up from these and other sources.

We must first remark, that well-kept, good conditioned stock, unlike those which are lean, can readily be fattened at any season of the year by extra feeding, and generally with profit. Lean cattle are not readily started in growth—they cannot be fed high with safety or economy. They must be fed moderately at first, and at the most favorable season of the year, to gain in size and weight with the smallest amount of grain and care.

A well known stock-feeder says, "No farmer ought to buy lean cattle to fatten in winter. They should be fair beef to begin with." But while stock are kept in the way a large majority of farmers keep them, plenty of lean cattle must be fed for beef, if not profitably, then unprofitably. That it would be better for the farm and the farmer to keep all stock at all times in fair order, can scarcely be questioned. Their value would be double what it now is, at no real increase in expense of keeping. We trust the improvement now manifest in this respect, will go on until good keeping shall be the rule instead of the exception, as is now the case.

But to return to the feeding of lean stock. We are inclined to think spring by far the best season to bring them most readily and cheaply into good condition. Commence feeding grain—only a small quantity at first—as soon as grass starts so as to give a fair bite in the spring, and keep in the stable at night with plenty of good hay before them. It depends a great deal on the character of the pasture as to the best time to turn stock upon it in the spring. Clover and timothy are materially injured by feeding too early; while June grass, white clover, and various other indigenous grasses, can be moderately fed, especially on low and tough pastures, at an early stage.

If any thing will give cattle a start in condition, combined with fresh grass and good hay, we think oil-meal, mixed with other meal and fed daily, will do so. We have been surprised at the rapid improvement of a pair of two-year old steers, lean enough when turned to pasture, which have been fed daily for less than three weeks, a quart of corn and barley-meal each, ground fine, with the addition of half a pint of flax-seed husks, (it having been skinned by the mice.) They have good pasture, but have been kept without hay—and indeed had very little besides straw and stalks through the winter. Eight weeks feeding, consuming about one bushel of meal each, will fit them for sale, and ease the demand for pasturage during the heat of summer, though no doubt it would pay well to keep them growing in size and fatness for six months or longer.

An experienced farmer of Central New-York, says that "a bushel of corn-meal fed to an animal when being turned from hay to grass, is worth three dollars." Taking the gain in flesh from such treatment into comparison with the loss in weight which would be incurred without the grain, (and hay at night,) the estimate is no doubt within bounds. It is more difficult to get stock from hay to grass without loss, than many imagine, and we should be glad to publish, more largely, the experience of our farming friends on the subject. Though not immediately connected with beef-making, we must add the remark, that milch cows very much need this hay at night, and a regular feed of grain or roots once a day, for a month at least after going to pasture. It will be the most profitable attention we can give them. R.

NEW APPLE-INSECT.

MESSRS. EDITORS—I have been this morning examining my young orchard, which has been set, a part four years, and a part three—with a few trees that have been filled in this spring in vacancies. I find a few trees killed by the winter as I suppose; but the worst of all is about ten or twelve, which were set this spring, that have been destroyed by an insect of some description, by eating out the buds; and some limbs on my trees that have been set four years, have been served in the same way. I enclose four of the buds taken from a tree that has been set four years, that you may see the way they have served me. A neighbor of mine told me that he lost over four thousand last year of young seedlings one year old. He told me that a worm similar or the same as the cut-worm in our corn, is what destroyed his.

Now I wish you or some of your numerous correspondents, would tell me how to prevent them from destroying my trees another year. I think their work is finished this spring. The trees that have not been already destroyed, have got too far advanced for them to do much injury to.

Plattsburgh, N. Y. A SUBSCRIBER.

We have no knowledge of this insect, nor do we find a notice of any quite like it in either Harris or Fitch. There are some insects that destroy the center of the buds and draw the outer leaves together with a web and form a nest; but no web nor nest was found in these specimens. This depredator appears to have known just where to find the most delicate morsel for his food, and has accordingly eaten out clean the center of the young bud, while yet unexpanded, and perhaps not swollen over a fourth of an inch long. We should think it must be a smaller grub than the common cut-worm, as the cavity eaten out is only about a twentieth of an inch in diameter. Its work appears to be quite similar to that of the *Haltica chalybea* or grape-vine beetle, which treats the buds of the vine in the same way. If our correspondent finds the insects, we hope he will preserve them, and send specimens by mail in a small vial or quill to Dr. Asa Fitch of Salem, Washington Co., N. Y., and place others in a gauze cage, keeping them well supplied with apple-buds as food until they change to the pupa state, and to the perfect insect, sending these also to Dr. Fitch.

THE MOLE PLOW.

An experiment was lately made with Case's mole plow by J. Dunham, of Etna, Tompkins Co., N. Y., on the grounds of Robert B. Howland of Union Springs. Much interest having been lately felt on this subject, and having witnessed the experiment, we think our readers may like to hear the results. This mole plow is briefly spoken of in a communication on page 235, current volume of the Co. Gent. The statement there made of the amount of labor capable of being performed, appears to be correct. The machine was worked with ease by two horses attached to a sixteen inch capstan by means of an eighteen foot lever, the force being thus multiplied 27 times, and the double cable, running over a pulley, again doubling this power to 54 times. Estimating the friction at one-third, the actual multiplication of force would be 36 times—equal to a 72 horse power to move the coulter and its mole.

The experiment was successful. The subsoil was a strong clay, clear of stone—the kind of soil best adapted to this mode of draining. It made a smooth, clear mole about 4 inches in diameter, and two and a half feet deep. The coulter left an open slit in the soil about three-fourths of an inch wide, but the lower part was immediately closed by the pressure of the mole. The horses walking at the rate of three miles an hour, formed a drain at the rate of about five feet per minute, or 18 rods per hour. Allowing about half the time for removing and adjusting the machine, it will be found capable of cutting at the rate of 80 to 100 rods per day—this amount has been generally accomplished where the soil is adapted to its working, as in the present instance.

This modification of the mole plow (Case's patent,) is probably one of the best that has been used. Like Fowler's English drain plow, it is furnished with a vertical screw for altering the depth, as the surface of the ground may require, while it is much simpler and cheaper than that ponderous and complex machine—the entire cost of Case's is, we think, only $150.

For the first time, during this experiment, the attempt was made to draw tubular tile into the mole, like Fowler's mode, and was entirely successful. From 50 to 100 feet were strung at a time on a large rope, which was attached to the rear end of the mole. The work appeared to be performed in a perfect manner. About a hundred feet could be introduced at a time, when it became necessary to dig a hole down in order to draw out the rope, and introduce a new string. Hence there was more delay in this process than by simply cutting a mole. We cannot see, however, any objection to the use of a longer rope, so as to draw in at least two hundred feet of the tile, judging from the ease with which this was apparently accomplished. Three men, with this machine and one pair of horses, could undoubtedly introduce sixty rods of tile in a day, and possibly eighty rods. In this first experiment, from three to four were drawn in per minute, and twelve rods were finished in about three hours, including all delays and stoppings.

We had no opportunity of witnessing the effect of obstruction by stones. We were however informed that small stone was readily pressed to one side, and that the horizontal joint of the mole enabled it to pass to one side of larger ones. But where still larger ones existed, it was necessary to dig down and remove them, which of course caused much delay. Hence this machine is not adapted to stony ground. It is capable of cutting drains three and a half feet deep, although in the experiment but two and a half were attained.

In a stiff clay subsoil, we have no doubt that the mole, without tile, if three feet deep or more, would endure for an indefinite term of years. In a looser or more porous subsoil, tile would be indispensable. Our readers may easily estimate the cost, where a machine is purchased and large farms are drained; the wear and tear, cost of team, and of three men, being about five dollars a day, or a little over six cents per rod. For smaller jobs, the proprietor of the machine charges ten cents a rod, the farmer furnishing team and two hands, which is not any cheaper than cutting ordinary drains three feet deep by means of the new ditching plow, in connection with shoveling out by hand; but is much cheaper than the old mode of cutting drains wholly by hand. There is one advantage possessed by the mole plow which should not be forgotten—a meadow or pasture may be thoroughly drained from one side to the other, without ever breaking the sod.

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Butter from Twenty-five Cows.

At the winter meeting of the Chenango Co. Ag. Society, in January last, the prize of $25, offered "to any dairyman in the county who will produce the most in value, in proportion to the cows kept, not to be less than ten," was awarded to Mr. John Shattuck of Norwich, whose statement, copied from the Transactions of the Society, we annex:

To the Committee on Winter Premiums.—I wish to be considered a competitor in the Dairy premiums, and would make the following statement of the amount produced from twenty-five cows:

Whole amount of butter made,			4,601 lbs.
" " sold, 4,350 lbs. at 25c.		$1,087.50	
" " used in family and on hand, 251 lbs. at 25c. per lb.,		62.75	
" " milk sold,		2.05	
One veal calf,		5.00	
Ten calves raised on skimmed milk, and sold at $5 each,		50.00	
14 Deacon Skins, sold at $1.10 each,		15.40	
1 pair calves on hand, value of increase,		12.00	
Whole amount of butter, cheese, deacon skins,			$1,234.70
Whole amount of pork made, 2,230 lbs., sold at $6.75 per hundred,		$150.52	
Amount of lard, 60 lbs. at 1s. per lb.,		7.50	
Total,		$158.02	
Deduct for value of hogs in spring,	$28.00		
Amount of grain fed,	12.50		
		40.50	
Leaves a nett balance of,		$117.52	117.52
Whole amount,			$1,352.22
Average per cow,			54.08

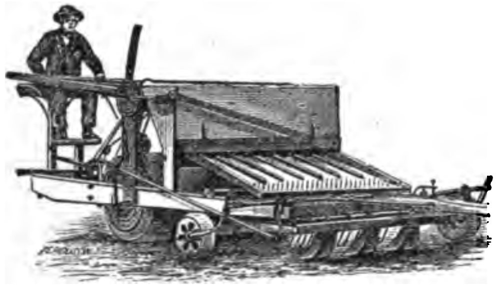
This average to the cow is without any allowance for milk or cream used in the family.

Statement of manner of making Butter.—The milk is set in tin pans, and allowed to stand about 36 hours in warm weather, when the cream is taken off and churned by dog power. Temperature of cream about 55° Fahrenheit. When the butter comes, it is removed from the churn, and washed in cold water until the buttermilk is removed, and then salted with Ashton salt, about one ounce to the pound of butter, and then covered tight and set in the cellar for 24 hours, when it is worked over and packed in firkins, being careful not to work it only just sufficient to remove the buttermilk.

Manner of keeping through the season.—I keep the butter covered with strong brine from same kind of salt used for salting the butter. Cost of making the butter is about seventeen cents per pound.

Manner of feeding Calves.—I generally let them suck the cow until the milk is good, and then commence feeding them skimmed milk on the start, letting it stand twelve hours at first, and as they grow older let it stand longer, and they will soon get so as to drink it sour and do well.

Manner of fattening Pork.—Last spring I had four shoats that would weigh about 80 pounds each, and I bought four pigs, and fed them nothing but sour milk and buttermilk from the dairy, until October, when I commenced feeding them a little soft corn, (I suppose you all know what that is this season,) not enough to destroy their appetite for the milk, and continued to feed in this way until butchering time. They consumed fifty bushels of ears valued at 25 cents per bushel.



DUANE'S SEEDING MACHINE.

The above cut represents a new labor-saving implement, invented by Col. J. B. Duane of Schenectady, of which a Schenectady paper says:

We witnessed on Thursday last, the trial of Col. John B. Duane's Sod Seeding Machine. As this is an entirely new implement in agriculture, and as on the trial all the purposes which it was built to accomplish were well, fully and satisfactorily answered, we shall make no apology to our readers for giving rather a full and particular account of what the machine is. But before attempting to do this, we must be allowed the privilege of at least hinting that the name chosen to designate the machine is not at all descriptive of its character; it will, it is true, answer an admirable purpose as a sod seeder, for which it is peculiarly adapted, but it is also fitted for so many other uses that a more comprehensive and expressive name should be found for it. The machine, then, is a combination in which the processes of cultivating the ground, sowing oats or other seeds of whatever kind, harrowing in the seed, sowing clover and timothy, rolling the land after sowing, and sprinkling plaster evenly over the surface of the ground, are all accomplished with ease at one operation by a two-horse team. The advantages to the farmer may be briefly stated thus:

1. It leaves the ground in a light and friable condition; as the team travels in front of the whole operation, the ground is never poached by the horses' feet after the crops are put in.
2. The Cultivator and Drag are so constructed that they *clear themselves* of all obstructions.
3. The driver and team go over the ground but once, while the ordinary mode of cultivation requires the ground to be traversed six times.
4. The seed is sown more evenly than can be done by hand. Oats, clover and timothy, in fact any seed, can be sown equally as well and with the same uniform evenness in a gale of wind. The construction of the seed-sower is such that the farmer can regulate at will its operation, and sow one peck or five bushels to the acre at his pleasure.
5. It covers the seed most perfectly.
6. It sows plaster with great evenness.
7. The driver can maintain his seat at all times on the box.
8. By dynamometer test, the draught is found to be about equal to that required for turning up the sod.
9. By the peculiar formation of the cultivator and drag-teeth, the machine is admirably adapted for the cultivation of newly turned sod.
10. A great feature in the machine is its power of freeing itself from any obstructions that may lie in its path, passing over them easily. The trial was made in a field from which a crop of broom corn was harvested last year, and in which the stalks were quite thick. In no single instance did it fail to free itself, nor was it any time so clogged as to need to be freed from these surface obstructions.

The inventor, Col. John B. Duane, after spending the best ten years of his life upon a large farm, became so impressed with the imperfectness of the implements in ordinary use, that he set himself resolutely to the task of inventing machinery which should overcome the tediousness of the operations of the farm. To this end he has applied himself with untiring industry for a year or so past, in developing and perfecting the machine which so fully vindicated his claim to the title of Inventor in the trial made on Thursday afternoon; so confident was he that the machine would perform satisfactorily all that he claimed for it, that he ventured upon a public exhibition after but one private test, and we are happy to record the unqualified success of the experiment.

There is one other advantage it would be reasonable to state, and which might not enter the consideration of some, that it will sow up and complete until a storm actually occurs, leaving the farmer under no apprehension that he cannot cover all he might sow on the appearance of a storm.

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[For the Country Gentleman and Cultivator.]

USE OF THE MOLE PLOW.

Messrs. Editors—In answer to your Iowa correspondent, I would say that I began last year to use the mole plow. Our first attempts were in a measure failures; but after becoming a little skilled, we succeeded to perfection, the underdrains still working. Mr. Trimble of Highland, O., underdrained last year 230 acres with mole plow, and claims 20 bushels corn on the acre increase, making 4,600 bushels corn in favor of its use in a single season. Edwin Reed, Huron Co., O., underdrained ten acres last year, still operating well.

This mole plow is so constructed that it is self-holding, drawn with team adjustable to any required depth—easily drawn back in case of obstructions, and course changed, so that land must be very stony to prevent its successful use. When no obstructions occur, with sufficient team it can be drawn with the same speed as the ordinary plow. On prairie lands from 10 to 18 miles can be made in a day. I could multiply testimonials if I felt warranted in taking up space—shall be willing to answer any communications by letter or otherwise. H. R. Jerome.

Monroeville, Huron Co., O.

Eds. Country Gent.—I notice that an Iowa subscriber or correspondent, wishes the opinions and experience of farmers in reference to the mole draining plow. Having had some experience myself as well as observing the operations of others, I will here give my opinions for what they are worth, if worth anything.

Several machines have been constructed in this city and vicinity by various persons, and most of them have received a patent therefor. The most prominent of these I have examined. Two years ago, while mole plows were a new thing in this section to most of us, myself and several others made a trial of their work. I had some 300 rods of this ditching put in, on what might be called a level prairie, but having a slight descent. This was put in the wet year—with us in Illinois, (two years ago.) I was highly pleased with its operations for a time, as it discharged finely until late in the fall, when it ceased, as I then supposed from want of water in the ground, the rains in the latter part of the season having ceased, and the ground being comparatively dry. Early the following spring it was for a short time very wet, and I looked in vain for my drain to discharge the surplus water that I knew must lie in the ground; but it did not discharge a drop to my knowledge. With this, I came to the conclusion that my drain had filled up so as to obstruct the passage of water.

My drain was put down from 3½ to 4 feet below the surface. It was put in with a machine not regulated for the elevations and depressions of the surface; consequently the moulding and all, made my drain as varying as the surface from a level.

Since this time, these machines have been very much improved, in such a way as to keep the mole at a certain depth in the ground, no matter how uneven the surface, thereby having no ups and downs in the drain, which is far preferable, as all angles in the drain are acted upon by the water more or less, having a tendency to block the drain, as I think was done in my case. The conclusion I arrive at, after observations in my case, and I can bespeak the same of others in my vicinity, are these:

That the mole machine will work and give satisfaction when operated in a slough where there is water to discharge all the season round. I know of instances of this kind, where the water has been taken to water stock, and the drain has not yet failed, although sunk some five years since. But I do not think it of any use to run this kind of a drain where the water will be likely to run but certain times in the year, as I am of the opinion that after the water has ceased to occupy the drain, that it (the sides of the drain,) begin to dry and flake off into the drain, and ultimately close it so as to stop the passage of water, as in my case.

Perhaps others may have been more fortunate with theirs. If so, should be glad to hear from them. A. P.

P. S. I would say to Frank Bassit, that I operated with a piece of ground likely to bake in wind and sunshine by plowing deep, and at the same time ridging as much as possible in lands not over 40 feet in width. My dead furrows are 20 inches lower than the back furrow, and I have no hesitation in saying that this piece of ground is as porous and in as good condition as is usually seen. A. P.

Galesburg, Ill.

[For the Country Gentleman and Cultivator.]

Importance and Value of Manure.

Near Geneva, 21st May, 1860.

Messrs. Tucker—Some years ago I had an article published, I believe in the Genesee Farmer, about the waste of valuable manure made by cattle and hogs at the distilleries, which is almost in all cases, washed into the stream or river on which the distillery is situated. In the article alluded to, I offered, if any farmer living near a distillery would get from 12 to 20 loads, and put it on an acre of ground as directed, for either grass or grain, (if his land was not already rich enough,) if it did not pay for his labor and expenses in his first crop, that I would pay him for his labor in getting the manure. I never heard from any one on the subject.

I have a farmer friend who lives at no great distance from a distillery where a large number of cattle, say some 400, are kept and fattened, from five to eight months in the year, besides many hundreds of hogs. This farmer was often complaining to me that nothing could be made at farming on such land as his, but on such land as mine a man could make money. I knew this to be nonsense, as his land naturally is as good, and I think better than mine. When I bought mine, one acre of his would have been valued higher than two of mine.

When he complained about the unprofitableness of farming, I would tell him he did nothing to improve his farm, only putting on manure made from straw. In that way he only got straw in return; he must have something better than straw manure to make grain; seeing the virgin soil was exhausted. I asked him why he did not draw some of those thousands of loads of manure that were washed into the river from the distillery every year? Oh, he said, it would never pay. I asked him how he knew, when he had never tried it, and told him that I was confident that it would pay me, if it was as near me, and told him if he would try 20 loads on an acre, if it did not pay the first crop, in either grain or grass, I would pay the expense. After much talk on the subject, I got him to commence drawing in winter to manure ten acres, the worst part of his corn field; and now for the result. That ten acres produced 30 bushels ears per acre more than the unmanured part, and more than double the quantity of stalks, and you must remember that the manured part was the highest, and by far the *stiffest* clay soil; besides I don't think he gave it a fair chance in testing the difference between the manured and the unmanured, as he took the five rows adjoining the manured part, and five rows of the manured, and the manured part being the highest land, part of these five rows undoubtedly got some benefit from the manured five. When drawing the manure home the first year, as almost every load passed, I understood he said, there goes another shilling, the price paid for having it taken out of the stables. But last winter I was told he drew enough to manure 25 or 30 acres fully, and when the teams were passing his house, he would say, "there goes the *gold*."

The difference between the good and bad farmer lies in the making good or bad manure, if the land is dry. When I first came on this farm, and my neighbors saw me heaping and gathering all the dung I could, some of them would ask me if all the old country folks liked as well to work among manure as I did? I told them that all those that made anything by raising grain did. Some said they would rather do with less grain than work *that way*.

John Johnston.

FIELD CULTURE OF THE ONION—II.

Gentlemen—In a late communication about the culture of the onion, I concluded by promising to add a a few observations about *harvesting* and *marketing* the crop.

After the onions are tolerably grown, their tops fall and wilt a little; at this period they are pulled and thrown together in beds of about a dozen rows in each; here they are permitted to lie about one week, when they are collected and taken under cover, generally to the open barn floor. Here they are sorted and cleaned of all refuse material, and laid away to be barreled or taken in bulk to the market, which is generally found at Boston. Sometimes a dozen or more wagons will start together early in the morning, so as to be on hand to deliver as soon as the purchasers are ready to receive them. Others barrel up the onions, and hold on upon them until they command the highest price of the season. About 3½ bushels will fill a common flour barrel. The price per barrel has lately ranged from $2 to $4—and the product per acre has been from one to two hundred barrels, according to the quality of the land, the quantity of the fertilizers applied, and the industry used in the cultivation.

These are the general features relative to the culture of our onions. I speak of what was before the *devourer* came in the form of the *onion maggot*. When this appeared the onion died, or nearly so. This insect is grown in this manner. A small, light colored fly is seen fluttering about the onions as soon as they are fairly out of the ground and beginning to be seen in rows. This fly deposits its small white eggs near the bottom of the plant, whence springs a worm that insinuates itself into the growing plant, and eventually into the bulb as it enlarges. It is not uncommon to find a dozen or more of these maggots or worms in a single bulb, and wherever they go they are *death and destruction to the onion.* Whether they are limited in their operations to the plant in which they originate, or whether they migrate from one plant to another, I am not advised, but think it probable their operations are limited to the plant in which they originate. Nevertheless, I have known them so numerous as to destroy the entire crop on fields of several acres.

For *three years* last past, 57, 58 and 59, they have been a serious obstacle in the way of this culture; so much so. that many cultivators have contemplated giving up the growing of onions. Unwilling to do this, others are holding on, hoping for "a better time coming," flattering themselves that their dreams of imaginary wealth from fancied crops of onions, are not so soon to be disappointed.

South Danvers, Mass. J. W. Proctor.

P. S.—It may be remarked, in connection with the culture of the onion, that it affords a convenient employment for the young, both *boys* and *girls*. In the season of weeding there is a demand for all the laborers that can be obtained. Well trained boys, from 12 to 16 years, will do as much as men, and are glad to work for half the price of men. The shrewd calculator who has an eye to the windward, is careful to avail himself of this advantage. The same is done after the crop is gathered to the barn, by employing girls of these ages to sort the onions. I have heard young girls when thus employed, say they could earn *fifty cents* a day by sorting onions at *one cent* per basket, holding a bushel. This was before they began to mount their *crinolines*—with these of full dimensions, I think it would be as difficult for them to approach the pile of onions, as it is for a man of 240 pounds to engage in weeding them; and this *I know* to be almost impracticable.

EDITORIAL CORRESPONDENCE.

Greenfield, Franklin Co. Mass., June 8.

With the view of spending Wednesday at Brattleboro', as intended when I left home, I have also had the pleasure of accomplishing a long cherished purpose to see something of New-England Agriculture in this part of the Connecticut Valley. My letter at this late date must not be as long as I should like to make it, and I can therefore only note down as concisely as possible some of the earlier gleanings of the past three days.

Upon the invitation of Fred. Holbrook, Esq., an early contributor of our own, and long the President of the Vermont State Ag. Society, a little party assembled day before yesterday to witness the trial of what has been named the "Universal Plow." It is the result of much time and labor expended by him during a number of years upon the problem of improving this important implement, and although it has now been in use to some extent in this part of New-England for two or three seasons, Mr. H. has, I believe, from time to time been perfecting its details, and a description of what is now attained will probably be new to most of our readers.

The Field.—The trial took place upon the farm of Richards Bradley, Esq., near Brattleboro', on a meadow in admirable condition for plowing. Mr. Henry Brooks, of Acton, Mass., was the plowman—a winner of numerous prizes, I understood, in this department of agricultural exertion, and under whose management nothing but a good plow was necessary to render the work all that could be desired. The first operation was in turning over the sod upon a part of the field that had lain in grass five years—soil a clayey loam, verging in a narrow strip across the furrows, upon a more sandy character; no stones; probably never plowed before deeper than six or seven inches.

The Plow.—The idea of the Universal Plow is to furnish a skeleton, accompanied by a series of changeable castings, such that the farmer can either select any one kind of the latter for a particular object, or by choosing three or four, obviate the necessity of purchasing and storing just so many complete and separate plows. The number of mould-boards provided is 12, forming an "intervale" series, flat furrows of five sizes, an "upland" series, also flat furrows, of four sizes, one "lap furrow" mould-board for stiff clays, and two "stubble" or old ground sizes. By adding to the last mentioned a small forward or "skim" plow, we have also two "sod and subsoil" sizes. The above require three changes of land-side shoe, of different lengths. By the use of steel in the share, land-side and mould-board, the same implement is employed for breaking up bog and prairie.

As already intimated, it is not supposed that a single purchaser will be likely to want it for the whole variety of uses to which it may be put, but the object has been to make it take the place of several of the different sorts which otherwise he would have to procure separately. One farmer, for instance, who was present, remarked that he had seven plows, but with this he could dispense with four, only retaining beside it, I think, a one horse corn plow, and a side-hill reversable one.

The Trial.—With this preface I can more briefly refer to what was actually done in our presence. The beginning was made with two fine yoke of oxen before the largest size of "intervale flat furrow," opening the first furrows 8 inches deep and 16 wide, and then set to run an inch still deeper and two inches wider. This was going below the depth to which the soil had been previously plowed, and the newly inverted subsoil would shell off slightly in turning; otherwise the furrow slice was laid over very handsomely, its surface, as finally exposed, seamed and cracked, and ready to pulverize under farther cultivation. Next came a smaller size, intended for three cattle, or "four cattle light," which was put in about seven inches by fifteen. Thirdly, we had one yoke of oxen before a still smaller size, running six inches deep and twelve or thirteen wide. The "intervale" plow, it should be added, has a wheel ten inches in diameter, and the same is also used upon the "sod and subsoil," but the "bog plow," of which we shall speak later, had a smaller and broader one.

The trial of the smallest size "sod and subsoil" proceeded after a change of mould-board, the removal of the coulter, and the addition in front of the small "skim" plow. The mould-board here employed differs in principle from that upon the "intervale" plow, being the same as is used for the upland or "stubble" plow—making a shorter twist, and throwing the ground over so as to break it up finely. The depth cut was eight to nine inches, and the breadth about eleven—the sod cut neatly off, laid *perfectly flat* at the very bottom of the furrow, and then the rest of the earth so loosened up and shaken over the buried sod, that the bottom of the furrow was 21 inches below the surface of the field when plowed. The next trial was with the largest size "sod and sub-soil," when the furrow was fully 12 inches deep and wide, and the labor of lifting this weight of soil and turning it over in a condition so thoroughly broken up, above the sods laid down beneath, was the most striking point in the day's exhibition

A difficulty in the action of the old Michigan sod and sub-soil, has been that the forward *skim* doubled up the sod instead of turning it flat over, and consequently the work was badly performed. In the present trial it was inverted completely, and when the oxen were started up more briskly, the earth raised over upon the top of it came out in what might almost be called a shower of thoroughly broken fragments, and it was thrown up so loosely that on measuring from a level with the highest lying clods to the bottom of the furrow where the plow was running deepest, the depth taken in this way was found to be 26 inches—in other words, both sizes of the sod and subsoil loosened up the respective quantities of earth through which they passed, so as to make it occupy something more than double its original space.

We did not see the "Stubble" plow tried, but the same mould-board used in the "Sod and Subsoil" is there employed, so that we could easily see how it would operate to invert and pulverize on old upland soil.

The Bog Plow.—The next trial was in cutting a bog which had never been plowed before, where the tussocks of grass and roots were exceedingly well matted together, requiring a sharp edge to detach them, and great force in the first furrow to throw them over. The latter was at length accomplished mostly by hand, and then the work proceeded without difficulty, taking out a slice 8 or 10 inches deep and 20 to 24 in width. Upon this plow a circular cutter is attached, and it has a wide steel edged share, and a draft rod so that both oxen may walk upon the sod, as one could not easily have found a footing in the mire at the furrow bottom. When taking out its largest furrow, its action was very fine; it is desirable to have the whole of the grass completely buried in, in order that none may have any chance of growing—an end which was accomplished quite perfectly throughout.

Lap Furrow—The day concluded with the turning of several furrows, lapping one upon another, at an angle of 45°, 7 inches deep and 10 wide, and the work equally well performed with what had preceded it.

Of course there was no room in testing a plow by itself, for dynamometrical comparison as to draft, but I think there was little doubt that an enormous weight of earth was stirred in several instances with perhaps unusual facility. The good plow must combine in its operation something of the two powers of the wedge and the screw, and if careful calculation to reach scientific results in a scientific way, can be effectively applied to determine its form, Mr. Holbrook appears to have made the experiment as earnestly as the protracted study of the subject for eight or ten years will admit.

During this period, there is no doubt that our farmers have, by degrees, been learning to plow better and more judiciously, or that our manufacturers have been improving the character of the implements offered for sale. But it is very singular how little evidence of either of these facts is afforded, either by the files of our agricultural journals or the transactions of our societies. While both have been crowded with the discussion, for example, of the different methods of harvesting by machinery, and competition in that and some other branches of manufacture has left no stone unturned in the rivalry for public approval and patronage, we have seen the makers of the Plow silently resting on their oars, receiving whatever demands might come to them through the ordinary channels of trade, but apparently quite contented that the great body of the farmers of the country, and especially that leading and important class who read and think, should remain, so far as any efforts they make to the contrary are concerned, in almost entire ignorance of whatever improvements may be under way. L. H. T.

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[For the Country Gentleman and Cultivator.]

DOMESTICATION OF WILD FOWL.

The Guan.

From Botany and Horticulture we have in recent times derived wholesome and substantial vegetables; plentiful, grateful and luxurious fruits; forms of delicate and fragile beauty, to decorate the mansions of the wealthy patrons of the science; continued additions to our woods and shruberies, our hot-houses, our cottage gardens; nay, by the sanative force of herbs, even disease has been arrested, the irritation of incipient insanity allayed, fever mitigated —in short, life prolonged, and made more comfortable during its prolongation. What, meanwhile, has Ornithology effected to increase our store for the last three hundred years? We do not say, nothing; but we dare not say, much more than nothing.

Ornithology has imparted little practical knowledge respecting those creatures about which the poultry-maid could not already give us information. Even Agriculture, which requires so heavy a ballast of capital to carry her along steadily on her way—even Agriculture has introduced turnips, swedes, mangold-wurtzel, and other crops, within the memory of our fathers and grandfathers; but ornithology does not this day publicly decide, in print at least, whether birds like those now under consideration, promising truly or falsely to be as valuable as turkeys or Guinea-fowls, and which have been captive at least two hundred and fifty years, are or are not easily and profitably propagatable in our farm-yards.

Mr. Swainson, relying mainly on the circumstance that the Curassow and Guans are included in his rasorial types, also expresses a sanguine hope, accompanied by a reproach for past neglect, that an important addition to our poultry stock is about to become firmly established in England. "It is singular," says he, "that so little pains have hitherto been taken to domesticate these American fowls; since by their sociability and gentleness, they evince every disposition to live under the dominion of Man. The flesh we know from experience is particularly delicious."

The Guans range, it is said, with the English pheasant in point of magnitude, though rather exceeding them, and go in pairs. When caught young and tamed, they appear to make themselves even more at home than the common fowls. They live on very friendly terms with other poultry, much more so than Guinea-fowl do, neither fearing their co-mates, nor yet attempting to tyrannize over them.

Who, then, that has a poultry-yard and its usual appurtenances, can help wishing to introduce therein a few of these most promising and inviting creatures, about which so strong a case has been made out?

Less is generally known respecting Guans, (a figure of which adorns the head of this article,) as far as their propagation under human sway is concerned, than about Curassows. Almost every late book, on Ornithology especially, which mentions them, recommends them as a desirable and easily-managed addition to our poultry stock; yet no author has either seen this project carried into practice, or has given, or can give, any directions in detail as to how they are to be successfully managed and reared.

Temminch remarks, "the Guans, with a disposition not less gentle and peaceable than the Curassows, have less frequently been made the subject of experiment. Although their manners are so similar, the Guans have not yet received from man the same regular and continued care, nevertheless, by judicious treatment we might easily succeed in transplanting these useful creatures into Europe; rural conomy would find in this genus of birds, as in the Galeated and Crested Curassow, important resources and new means of prosperity." This proved additional fund of profit seems surely deserving consideration and worthy a trial. Mr. Bennett, relying upon this opinion of Temminch's, and not, the reader is requested to bear in mind, upon any success in acclimating and rearing Guans that he had anywhere attained, writes, "there can be little doubt that with proper care and attention these birds might be added to the stock of our domesticated fowls;" giving as a motive for endeavoring to make the addition, the tempting incentive that "they are spoken of as furnishing an excellent dish for the table."

Thus, then, the matter stands at present, according to, we believe, every yet published authority. Guans and Curassows can be and ought to be reared in every farmer's poultry-yard, we will not say in flocks, but certainly in moderate and tolerable abundance. They are not, however, yet visible either here or abroad. Why not? There is a fault and a difficulty somewhere; either we have been very remiss and indolent in neglecting to make such valuable acquisitions, or nature has been unyielding.

Springside, 1860. C. N. Bement.

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Blacksmith's Scales for Peach Trees.

About two years ago I heard a neighbor say that he had found great benefit in using the scale from blacksmith's anvils around his peach trees. I had several that had been badly injured by worms, around which I placed the scale. Since that time I have not been able to find a worm, and the trees have recovered their green healthy appearance.

Newark, N. J. G. H. Bruen.

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☞ Warren Leland, Esq., of the Metropolitan Hotel, New-York, owns a place of 200 acres in Westchester county, upon which he keeps sixty cows. For the month of May the Metropolitan Hotel credits W. Leland $472 for cream and milk from his little farm in Westchester county.

PATENT OFFICE REPORT FOR 1859.

Reduction of Appropriation—Foreign Seeds and Cuttings—Distribution of Seeds—Contents of the Volume—Parsons on the Productions of the Ionian Islands and Italy—The Lupin, English and American Experience with it—Other papers and their subjects—The Orange in Florida—Agricultural Inventions.

We have been kindly favored by M. KELLEY, Esq., Chief Clerk in the Department of the Interior, Washington, D. C., with an advance copy of the Patent Office Agricultural Report for 1859, for which Mr. Kelley has our thanks.

In the introductory Report of the Commissioner, dated Jan. 3, 1860, he says:

"Owing to the reduced appropriation made by Congress for agricultural purposes for the fiscal year ending June 30, 1860, the office has been compelled to reduce its expenses and confine its action to a more limited sphere than heretofore. In doing this it was found necessary either to decline purchasing for distribution the usual varieties of garden and field seeds, or to abandon the experiment of propagating the tea and various other foreign plants and grape cuttings, for which orders had been given. The expense which had already been incurred in their procurement would hardly justify the office in throwing them aside. It was accordingly deemed advisable to apply the remainder of the funds solely to the procuring of information and preparing the material for the Agricultural Report, and to the propagation and distribution of such varieties of foreign seeds and cuttings as had been already engaged. These were of such a nature that if they had been distributed throughout the country immediately upon their receipt, the probability is that very few of them would have reached their destination in a fit state for propagation. The tea seeds, more particularly, arrived in such a condition that it was of the utmost importance to plant them at once. For this purpose large propagating houses were erected upon the government grounds north of the canal. These structures now answer well the purpose for which they were intended, as is exhibited by the fact that we have, ready for distribution, over 30,000 well rooted tea plants, 12,000 foreign and domestic grapevines, 900 rooted, seedless, pomegranate cuttings, and various foreign, medicinal and ornamental plants. These will be ready for distribution during the present winter and the ensuing spring."

"The nature of the tea plant is such that it cannot be successfully cultivated in the open air above the northern boundaries of Tennessee and North Carolina. For this reason, the larger portion will be sent south of that line. A sufficient number, however, will be divided among the remaining States, to satisfy the reasonable demands for such persons as have the conveniences necessary for their protection during the winter months."

"Last summer an agent was employed to travel through several of the Northern States for the purpose of collecting the best varieties of ripe native grapes. An experienced chemists was also engaged to analyze the fruit thus collected, for the purpose of ascertaining the amount of saccharine matter and other ingredients contained in the juice of each variety, and determining which kinds are best adapted to the making of wine. The reports of the agent and chemist appear in this volume, and will no doubt prove valuable and interesting to the public."

In speaking of the distribution of seeds, as heretofore, the Commissioner, as we conceive, very sensibly remarks,

"I have no hesitation in saying that the necessity no longer exists of distributing the various seeds of *domestic* growth, inasmuch as the facilities for obtaining them are such that every person of enterprise enough to cultivate them, can obtain everything in that line from the seed-stores."

The first article in the body of the volume, is a report upon the "Government Experimental and Propagating Garden," embracing, among other things, a history of the tea plant, its culture, preparation, &c.; as also, a list of grapevines, (25,000 plants.) These embrace seedlings and rooted cuttings from not less than fifty varieties of native and foreign grapes. The list contains about fifty named sorts. We here, however, only give the name of one variety, viz:

"Lady's Finger—Berries, three inches long, three-fourths of an inch in diameter; delicious flavor—from Egypt."

This is followed by a list of seeds, the result of orders made previous to March 1859—also a list of plants from Palestine, forwarded by the Rev. J. T. Barclay, a christian missionary from the United States to Jerusalem. Some of these may prove valuable acquisitions to the agricultural interests of our country, where the climate will admit of their culture. Among those forwarded were seeds of the Carob tree, or Carob beans. "It is generally considered the locust tree of the Scriptures, and its fruit has been called St. John's bread, while the shells of the pods are supposed to be the husks of which the prodigal son desired to partake with the swine." The pods in Egypt are so thick, and so charged with sugar, as to be regarded as a delicacy by the common people.

The next paper is an "Historical Sketch of the United States Agricultural Society,"—followed by a paper on the "Native Grapes of Arkansas and Texas," by H. C. Williams of Texas, which is succeeded by Dr. C. T. Jackson's report on the saccharine contents of native American grapes in relation to wine-making; as also a report by Dr. J. on the proportions of acids in native American grape wines made from the pure juice of the grapes. The next thirty pages are occupied by reports from John F. Weber of Washington, D. C., on American grapes—culture, wine-making, &c. There are also several other papers on the grape, wine-making, &c., which will doubtless be found very useful, as grape-growing and the manufacture of American wine, are exciting a great deal of interest in almost every section of our country. With our diversified climate and soils, and great variety of native grapes, we think the day is not far distant, when the products of the vine will become an important item in our statistical reports.

S. B. Parsons gives us some thirty-six pages of interesting matter "On the Productions of the Ionian Islands and Italy." If our limits would permit, we should be pleased to make copious extracts for the benefit of our readers. We can only make a few quotations, appending a few remarks. He says, at Agrami,

"In laying down a new vineyard, the land, which should slope southerly, is first well cross-plowed in the month of November, and allowed to rest till the middle of January. Trenches are then dug, about *five feet deep*, and from four to five feet apart, which are left open to ventilate about fifteen days. The plants, which are vigorous cuttings of the former year's growth, and generally from eight to ten feet long, are placed upright in the trenches, at a distance of five feet apart, the trench being then filled in to the depth of three feet. The upper end of the cutting is then (ox-bow like) turned down with its point stuck in the ground, to keep it fresh. As the season advances and the plant begins to vegetate, the trench is from time to time filled in."

Experience undoubtedly has taught these cultivators of the vine the necessity and economy of this deep trenching. But care in preparing the ground, and setting of the vine and fruit trees, we suppose is as necessary in this country as there; if so, many of our people are sadly deficient in this matter. We have seen many apple and other trees transplanted into excavated holes, the size and depth of a half-bushel measure, the owners thereof feeling quite complacent with the idea that they had discharged their duty in this business of fruit growing.

Mr. P. two or three times speaks of lupins—cultivated for cattle forage and for green manuring. Speaking of manures in Sicily, he says:

"The usual fertilizing materials are stable manure, and where it is to be had, that of goats and sheep. Bones, formerly used for manure, but now employed in chemistry, have become too expensive for the farmer, and are therefore left to be exported, in large quantities, to France and Genoa. Lupins, as before observed, are in frequent use for manure;

their thick succulent tops covered by the plow, form a highly fertilizing mass of vegetable matter."

We refer here to the lupin, believing it might be profitably cultivated for green manuring in many sections of this country, more especially upon light sandy soils. The lupin was used as food by the ancient Romans, and, as with the people of the present day, was plowed into the soil as a manure. Recently, in Germany, it has been found to be one of those plants by which unfruitful sandy soils may be brought most speedily into a productive state. The superiority of this plant for the purpose of enriching the soil depends upon its deep roots, which descend more than two feet beneath the surface; upon its being little injured by the drouth, and not liable to be attacked by insects; upon its rapid growth, and its large produce in leaves and stems.

In confirmation of the above, we quote from a letter published in the *Mark Lane Express* of April 25, 1859. The letter was written by Mr. Hartly, an English farmer, who was then making an agricultural tour in Germany. Mr. Hartley says:

> "In continuation of an account of those Flemish crops, I will commence this letter with the 'yellow lupin.' Wherever I have been in France or Belgium, I find a greater admixture of sand in the soils than in England. For some few years past on these soils, the agriculturists, or rather proprietors of these miserable lands, have been much impressed with the immense advantages to be derived from the yellow lupin, as a green crop to be plowed in. It is so effective that where it has been fallowed up, as in Pomerania, Saxony and Bradenburg, those estates, which before were worthless, now produce splendid crops of rye and lupins, without any manure being employed but that which arises from these plants.
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> It is not a high growing plant, but very leafy and branches much; consequently it may be drilled thinly at eighteen inches, and hoed or not, as you please. It is a sort of bean, sown in the spring at the rate of two bushels per acre, and plowed in when in full flower. The ground may then be sown again with it, and that crop also plowed in. It likes *deep cultivation*. The land is never sick of it, and when grown annually as manure, for six or seven years, it has turned the soil of a dark color, from the quantity of decayed matter deposited."

Mr. H. further says:

> "We have many sandy districts in Norfolk, Surry, and other parts, where I cannot see why it should not have the same effect as abroad in the north of Germany. There are many gentlemen there who grow from 120 to 200 acres of this plant annually, as the farms run large. They grow it for its seeds, and also occasionally cut it for fodder. The grain or seeds ripen in August. The feeding property of the grain is about the same as common beans. If mown for fodder in full bloom, it is considered quite as nutritive as clover, but I should doubt that. It has grown two tons per acre after having been cured. It is good for all animals, but cows must not be allowed too much of it, or it will give a taste to the milk. On soils that suit it, (and any will do except chalk,) it will grow a yard high, deeply plowed and subsoiled."

We experimented with a quart or so of the seeds of the white lupin last year. There is no essential difference between the yellow lupin and the white—seed sown broadcast on very poor sandy, irony soil, grew plants from 12 to 18 inches high. Those sown on a loamy, dark-colored soil, grew plants from 18 to 24 inches high. Others, drilled in on a good sandy soil, grew from 2½ to over 3 feet high, producing a good yield of seed. Sown in the spring as early as the season will admit of, without injury from frosts, and the plants will blossom in about three months, soon after which they may be turned into the soil, and perhaps another fair crop could be grown on the same ground before the autumnal frosts; if not, English turnips could succeed them. Clover is much used in many sections of our country for green manuring, and usually succeeds best on lime or marl soils, but poorly on feruginous (irony) soils—while the lupin does not do well on limy soils, but prefers a feruginous (irony) one. We think the lupin a plant well worthy cultivation, and hope many of our farmers will experiment with it and favor the public with the results, through the agricultural journals.

Forty-one pages are devoted to fertilizers by Hon. Thos. G. Clemson, L. L. D., which, from a rather hasty perusal, we judge to be a valuable treatise upon the important subject of fertilizers. This is followed by an article on "Veterinary Science and Art," and one on "Veternary Medicine," by Dr. Craig, of Washington. "The Acclimation and Domestication of Animals," by the same writer. Some 20 pages are devoted to J. M. Comstock's essay on "Fish Breeding." The breeding of fish is attracting some attention in various quarters, and may yet prove a profitable pursuit. Mr. C.'s paper will be eagerly read by all those having a desire to engage in rearing fish. About the same number of pages in the Report are filled with Henry F. French's paper on "English Plows and Plowing." Whatever Jugde F. writes is worth reading. But we cannot here go into a review or analysis of his article—it should be read in full. Arrangement of Horse Stables, by Dr. Rueff, Germany, and a paper on Saxon Merino Sheep, by Von Sternburg of Germany, are undoubtedly valuable contributions, but we have not had time to give them an attentive perusal. Sixty-two pages "On the Plants used as food by Man in Different Parts of the World, and at Various Periods," by Dr. F. Unger of Germany—translated from the German for this Report, containing a great fund of useful information about what people eat in different parts of the world.

☞ The Board of Managers of the State Agricultural Society of California, have fixed upon Wednesday evening, September 19th, for the State Fair, when the opening address will be delivered. The Fair will close Sept. 28th.

There are many other papers, "shorter or longer," but we cannot here go into particulars, but will name some of them. "Some Hints upon Farm Houses," by Samuel D. Backus, Architect, New-York, a useful and valuable paper, and should be carefully perused by all farmers who intend building dwelling houses. Meterology, by Prof. Henry, a valuable scientific contribution, which is followed by a dozen or more reports on Tobacco, mostly from consuls in foreign countries. There is one short paper on "Wooden Shoes." Should the cattle plague prevail in this country to the extent it has in some others, our people may yet be obliged to wear wooden shoes—if so, this will become a valuable paper for future reference.

Many of our readers are aware of the great injury the Orange trees of Florida have sustained by the depredations of the mussel-shell shaped scale insect that infest the body, limbs and leaves of the Orange tree, in countless numbers. To destroy the insects, various experiments have been resorted to by means of liquid applications, such as soda, sulphur, coal tar, aloes, spirits, syrup, lime; and, in fact, every imaginable thing, almost, was tried—holes were bored in the bodies of the trees, and filled with sulphur, calomel, &c., without producing any favorable result. Many of these experiments were tried by Mr. Glover, late Entomologist of the Ag. Division of the Patent Office. After many experiments it was discovered that Peruvian guano mixed with soap suds, and applied with a syringe, possessed superior efficacy over all other applications.

At page 554 of this Report, is a copy of a letter from Dr. Morague of Florida, giving the result of the "suds and guano" application to his orange trees. It had the desired effect. The Doctor says, "syringed my trees once a week for a month or two, and, am happy to say, with complete success. Although my grove was literally covered with the coccus, not one can now be found alive." Recipe—"to a barrel of soap suds add a common bucket of guano."

To the above we add the testimony of William A. Forword of Florida, who says:

"I feel it due to Mr. Townend Glover that I should bear testimony to his usefulness in the duties assigned him at this place.

"He experimented on my orange grove, and I consider he has saved it. His syringing of the trees regenerated them, and destroyed the insect. I have no doubt his remedy is a thorough one. It has certainly proved so in my grove, and others in this town, wherever practiced. I feel now that we have nothing to fear from the orange insect."

We do not see why the same remedy will not answer in destroying the mussel-shell shaped scale insect upon the apple and other trees, if applied during the early part of June, while the newly hatched insects are come-at-able. Perhaps, too, the same would destroy the rose slug, and those infesting the pear and cherry trees, and, perhaps, the curculio, and the green lice aphides that sometimes appear in such vast numbers on the tender twigs of the apple tree, rose bush, &c. Possibly a bucket of clear hen manure might be used as a substitute for the guano—the thing is worth trying.

The last eighteen pages of the Report are taken up in giving a list of Agricultural inventions or discoveries, patented for the year 1859, and we here give a summary of a small portion of them, viz: 13 bee hives, 49 cultivators, 37 churns, 19 grain separators, 17 harrows, 13 of which are rotary, 98 harvesters and harvesting machines, 72 corn seed and cotton seed planters, besides a large number of seeding machines and drills, thrashing machines, and other agricultural implements "too numerous to mention."

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OATS—CHANGE OF SEED.

The Canadian Agriculturist copies the article on this subject, given on p. 283 of this paper, and adds:

Our experience very much accords with that of the correspondent of the Country Gentleman, as stated above. A few years since, the Board of Agriculture of Upper Canada, imported from Aberdeen, in Scotland, several varieties of oats that are much esteemed in the British Islands. The seed of all the sorts was plump and heavy, weighing from 43 to 48 lbs. a bushel. They consisted of the Potato, Hopetoun, Angus, Berlin, Poland, and the Black and White Tartarian. The seed was sown by different persons on various soils, and the result was a gradual deterioration in quality year by year. These oats, however, were generally heavier than the ordinary varieties cultivated in this country, for three or four years, when they seem to have reached their minimum of weight. The mode of preparing the land, and the character of the season, of course affect considerably the quantity and quality of the grain. In Upper Canada our summers are generally too hot and dry for the oat. In the lower section of the Province this crop appears to do better; and in Nova Scotia and Prince Edward Island, owing to the greater moisture of their climate, arising from their contiguity to the ocean, oats yield a heavy grain in large quantities. For ordinary purposes we think that the Tartarian, White or Black, is the best suited to this section of the Province. It is hardy, and will more than make up in quantity what it may be deficient of in weight by the bushel. Seed oats ought to be frequently changed; getting them from different climates and soils as far away as possible. Like pigs, oats rapidly degenerate by sowing the same kind on the same farm for a number of years. The only remedy lies in frequently changing the seed.

ORIGIN OF VARIOUS PLANTS.

The annual meeting of the Paris Society of Acclimatation, according to the *Revue Horticole*, the present year manifests a flourishing condition in that popular and useful body. M. St. Hilaire, the President, delivered an interesting discourse, and the Vice President, M. de l'Huys, read a paper upon the most celebrated gardens of antiquity, in which he glanced at the origin of the various new plants derived from the East, and, later, from the New World. We translate from this part of his interesting memoir the following facts:

Cereals.—Wheat and buckwheat came from Asia—rye from Siberia—rice from Ethiopia.

Vegetables.—The cucumber from Spain—the artichoke for Sicily and Andalusia—the chervil from Italy—cress from Crete—lettuce from Coos—the white cabbage from the North—the red and green cabbage, the onion and parsley from Egypt—the cauliflower from Cypress—spinach from Asia Minor—asparagus from Asia—the pumpkin from Astracan—the eschalot from Ascalon—the bean from India—the radish from China—the melon from the East and from Africa—the potato and the Jerusalem artichoke from America.

Fruits, &c.—Asia sent forth the filbert, the pomegranate, the walnut, the quince, and the grape—Armenia the apricot, Media the citron, Persia the peach, India the orange, Mesopotamia the fig, Pontus the cherry and the hazelnut, Lydia the chestnut, Syria the plum, Mauritania the almond, and Greece the olive.

Among plants of different uses may be mentioned the Coffee originally from Arabia, Tea from China, the cacao (cocoa) from Mexico, tobacco also from the New World, anise from Egypt, fennel from the Canaries, the clove from the Moluccas, the castor oil bean from India, &c.

Trees.—The horse-chestnut came from India, the laurel from Crete, the elder from Persia, &c.

Flowers.—The narcissus and carnation came from Italy, the lily from Syria, the tulip from Cappadocia, the jasmine from India, the star-wort from China, the nasturtium from Peru, the dahlia from Mexico, &c.

Is it not time to ask—queries M. Barral after the above quotation—if any kind of vegetation at all naturally belongs to the Gauls? He claims, at least, the oak tree, but adds that the success of past "acclimatations" should encourage every nation to try new ones.

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GRUBS AND CUT-WORMS.

Eds. Co. Gent.—Your correspondent G. W. H., desires to know how he can extirpate those little pests without destroying his corn. With entire deference for your reply, permit me to say: Had he have asked the question at an earlier date, I feel confident I could have informed him. But my method I fear may reach him too late for his present crop, as it will not do to apply it after the corn is in leaf.

About ten years since I learned from an old *brick-maker*, that they always prepared a bed of clay in the autumn season for the following spring work, by digging it up and strewing it with salt, which he said destroyed the worms, otherwise the bricks would be filled with worm-holes and useless. This confab took place just at corn-planting season, and I at once resolved to try an experiment.

Immediately after I finished planting my corn, I had about a table-spoonful of salt spread over each hill. I have continued to have this done every corn-planting since; and up to this date, I have never had a day's labor performed in replanting corn from the depredation of worms of any kind; and those of my neighbors who have tried the experiment, fully agree with me in believing that it is a sure preventive to injury therefrom. Let your agricultural friends try it, and if it fails to have the desired effect, it is what it has never done with C. Harvey.

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☞ Mr. W. C. Harbison of Pennsylvania, who has been extensively engaged in the management of bees in California and elsewhere, has prepared a volume of 287 pp., entitled "Bees and Bee-Keeping; a plain, practical work, with directions how to make bee-keeping a desirable and lucrative business, and for shipping bees to California." Our copy came from the author, but has the imprint of Saxton, Barker & Co., as publishers.

MANURIAL RESOURCES OF THE FARM.

It is an old maxim of husbandry, that "a good farm, like a good joint of meat, only requires basting with its own dripping," or in other words, that it will furnish of itself sufficient fertilizing material to keep up its maximum productiveness. As a general rule, we may rely upon this statement, and we propose here to offer a few hints on some of the manurial resources of the farm.

The first grand resource of the farmer will be found in the plowing under of greensward—the thicker and heavier, the more effective—to enrich the soil for other crops. Without grass *as a manure*, we should find it much more difficult to keep up the fertility of our farms. No other crop is so constant in growth—early and late, and under all kinds of treatment,—as that of the different grasses. No other returns so great a burden of vegetable growth to the soil, and at the same time furnishes so valuable a supply of food for stock, in both summer and winter forage, as this much neglected, yet everywhere present, product of the soil.

The growing of clover and the grasses lies at the very foundation of profitable farming, as may be seen from several points of view. And first, as above hinted, plowing under a thick heavy grass sward furnishes an ample manuring for several successive grain crops. The decomposition of the abundant roots and stems of the grass supples nutrition for growths of a different character, and having a greater money value to the farmer. Hence it may be good policy for the farmer to give a large share of his labor and attention to producing a heavy growth of grass on all lands when devoted to this crop, knowing that this most cheaply and effectively prepares his soil for the production of other crops.

In another point, we see that grass-growing tends to improvement, when it is produced for the consumption of animals upon the farm. We can have no better resource for manure than in the practice of stock-feeding, and especially is this true of sheep and fattening stock, and in a less degree of all the animals of the farm. Indeed, it has become an axiom of husbandry that stock-keeping must have a place in the management of every farm to render it profitable for a course of years.

A *second* grand resource of the farmer for manure—for keeping up and increasing the fertility of his farm—is not only to pasture and fodder stock, but to fatten them by the aid of the grain products of the farm. This course will not only largely increase the amount of manure, but will give it, under proper management, a much greater effective value as a fertilizer. It was a maxim of an excellent farmer, Mr. Coke, late Earl of Leicester, "that the value of farm-yard manure is in proportion to what it is made of. If cattle eat straw alone, the dung is straw alone; the cattle are straw, the farm is straw, and the farmer is straw—they are all straw together." And to come to an authority at home, John Johnston has advocated this course as the most effective and profitable for improving the value of our farms. "High feeding," says he, "would make higher manuring, by both making a larger quantity and a much better quality."

A *third* grand resource may be found in the inexhaustible muck beds so abundant in most sections of the country. These contain vast supplies of "highly concentrated vegetable food, not only partly cooked but seasoned," to quote Dana's "Muck Manual." It has been found by many extensive and repeated experiments, that (in the words of Prof. Johnston,) "it is only necessary to mix half-dried peat with any substance which undergoes rapid spontaneous decomposition, when it will more or less speedily become infected with the same tendency to decay, and will thus be rendered capable of ministering to the growth of cultivated plants." We have in former volumes given considerable attention to this subject, but its importance will allow of its frequent recall upon the attention of our readers.

The fertilizing matters allowed to run to waste upon most farms, might supply another valuable resource for improving their productiveness. The liquid manure of stock, the slops of the kitchen and wash-room, the contents of privies, refuse bones, and waste animal matter—these, and many other things cumbering our back-yards and befouling our cellars and store-rooms, would form a compost heap of great richness and no inconsiderable value. But we must leave the subject with our interested readers, hoping each will look about him, and see what are, and how he can best apply the manurial resources of his farm.

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SYMPTOMS OF PLEURO-PNEUMONIA.

In our last number, p. 364, we gave an account of the appearance of this disease in New-Jersey. In the Newark Daily Advertiser, Dr. I. M. Ward, who was present at the examination to which the statement we published referred, gives the result of his observations as follows:

"In all cases examined the ravages were confined to the respiratory organs; in some cases the right and in others the left lung, had been the seat of the disease, and in every one involving the whole mass of lung with its covering, and extending from it to the lining membrane of the ribs. Hence its name *Pleuro-Pneumonia.* The appearance of the bronchial tubes gave evidence of participation in the disease from extension to them, from the substance of the lung; disorganization of structure being found alone in the lungs and its coverings.

SYMPTOMS.—The incipient symptoms are *loss* of appetite, hanging of the head, and as the disease progresses an extension of the head—bright and watery eye, breath hot, breathing quick, with more or less agitation of the flanks, with an occasional cough, always dry; more or less thirst; horns and ears hot. The quick and occasional cough, coupled with great prostration of strength, more particularly mark the progress of the disease.

The ear applied to the side of the animal readily detects the impediment to a free circulation of air through the lungs, from the violent congestion that exists. So unequivocally declared was the existence of the disease by auscultation in one of the sick animals, that we venture to declare not only the existence of its fatal advance, but the portion and side of the lung to which it was confined. This animal being selected for experimental observations, the post mortem examination proved the correctness of the diagnosis.

The symptoms above detailed, and the examinations after death, proclaimed it an inflammation of the lungs, associated with a low grade of fever, depressing so remarkably the vital energies as to characterise the disease *one of exhaustion.* It having been long observed that fever in cattle would assume a typhoid form, we venture the opinion that it is analogous to the *Typhoid Pneumonia*, which occasionally prevails epidemically in some sections of our extended country, in the human race, as a desolating scourge. What of the disease we have witnessed with us is unquestionably communicated from animal to animal; call it contagious if you can do so without raising a controversy about the word contagion, but not epidemic. If this is so, let the sick animal be at once separated from the herd, and all comunication with other cattle be at an end.

Lois Weedon System of Wheat Culture.

The May no. of the London *Farmers's Magazine* has an article on the "Principles of Manuring," introductory to which the writer gives the following concise view of the system of growing wheat *without manure*, practiced for years by Mr. Smith at Lois Weedon:

As a means of illustrating both the principles and practical bearings of this celecrated controversy, it is impossible to select a more apposite, instructive, or important instance than that presented by the well-known agricultural triumph in successive and un-manured wheat-growing achieved by the Rev. Samuel Smith, at Lois Weedon. The manner of his yearly cultivation is as follows: At the usual time in autumn, the seed is drilled in strips, which (consisting, as each set does, of three rows ten inches apart) occupy thirty inches in width, and between strip and strip there is left an unseeded space of similar dimensions. During the growth of the plants in the ensuing season, the rows receive sedulous attention in hand-hoeing; while, at the same time, the interspace between strip and strip undergoes a constant succession of horse-hoeing and other fallow operations. Next year these fallowed spaces bear the strips, and the stubble of the preceding year's crop is plowed up and summer-fallowed in like manner. In one point of view, there is a perfect analogy between this expedient and a practice not uncommon on the heavy land of Essex, in which is pursued field by field the simple alternation of corn one year and bare fallow the next, to be again succeeded by corn, and so on for ever; but in various circumstances of detail, into which we shall not here enter, the Lois Weedon method possesses a superiority very favorable to both healthy and prolific cereal productiveness. Mr. Smith's experience in this mode of management dates back to the year 1846. The area of his operations is comparatively small, being only five acres. The soil is above average quality, and consists of a staple of good wheat land, resting on wholesome clay, and naturally dry. The implement used for inverting the soil is the spade, or fork, in place of the plow. The average yearly produce for twelve years, ending with crop 1859, has been upwards of thirty-six bushels per acre of prime marketable wheat; and the expenses of tillage, rent, &c., are as follows:

	£	s.	d.
Digging and cleaning,	1	14	0
Horse-hoeing, three times,	0	6	0
Plowing,	0	4	0
Hoeing and hand-weeding,	0	5	0
Three rollings with crushers at seed-time and at spring,	0	3	0
Two pecks of seed,	0	2	6
Dibbling,	0	5	0
Bird-keeping,	0	4	0
Earthing-up wheat,	0	3	0
Reaping, &c., thrashing, and marketing,	1	13	0
Rent £2, rates and taxes 4s. 3d.,	2	4	3
Total yearly expenses,	£7	3	9
Value of thirty-six bushels of wheat at an average price of 6s. 6d. per bushel,	£11	14	0
Deduct expenses as above,	7	3	9
Annual profit per acre besides the value of the straw,	£4	10	3

One other element of Mr. Smith's practice still remains to be stated, (and on account of its paramount importance it has been reserved for special notice,) namely this, that in each summer fallowing of the interspaces a method of deep cultivation is pursued, by which the upper and under strata of the staple are stirred, and inverted to the depth of ten or eleven inches; and if it be asked upon what grounds was this trenchant and very thorough tillage resorted to, the reply is, because theory and practice alike assured the experimentalist—1st, that usually in the soil, and ever in the air, there is abundance of nutriment for cereal crops, in proportion as the mineral and atmospheric elements are brought into mutual reaction within the pores of the soil, by perfect cultivation; and hence, 2dly, that by means of perfect tillage, the aid of adventitious fertilizing substances is not indispensable to the profitable growth of corn.

In point of agricultural importance, no industrial circumstance belonging to the present century is more entitled to deep consideration, than this brilliant, yet sound instance of tentative husbandry; nevertheless, in order to appreciate its true practical value, it is necessary to bear in mind, that as respects the happy combination of operative details of which it is made up, it consists of no principle or expedient in cultivation which had not been known and practiced before. As an example of cereal productiveness, procured without the intervention of cattle crops, what other unalternate system than this prevailed in England, when, prior to the introduction of roots and clover in rotation, she not only fed her own population with corn, but exported it largely to foreign parts? Nay, more—what other than this, is the still existing policy in the cereal countries of continental Europe, which now so largely provide England with breadstuffs. As for the *interculture* of the Lois Weedon method, admirable and efficient as the expedient is, it can be regarded simply as an adaptation to corn tillage of that method of drill husbandry hitherto confined in general practice to the fallow crops only; while finally, the deep working, if not so generally prevalent as it ought to be, has long existed in many of the best-farmed districts of the island.

Now, the moral we wish to point out, in the foregoing statement, is this—that, from the case where, under sunny skies, and on a rich soil, the lazy husbandman has only to scratch a little covering of earth over his corn seed to produce an abundant crop, up to the elaborate processes of Lois Weedon experience, there is every variety and degree of evidence to show that wheat or any other kind of grain can profitably be raised by the power of tillage alone, and that the use of manures, whether obtained from the cattle crops of modern rotation husbandry, or from external resources, is not indispensably necessary to profitable cereal husbandry. Nay, more—from the practice of all nations it is deducible, that in proportion (within certain bounds) to the greater depth to which a soil is stirred, and to the perfect annual tillage it receives, the produce of that soil will be more abundant.

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CHEDDAR CHEESE.

Morton's "Hand-Book of Dairy Husbandry," gives the following account of the manner in which this celebrated cheese is made:

"Cheddar Cheese-making differs from that already described, chiefly in the scalding of the curd; which is done by heating a portion of the whey, and letting the curd remain in it for a considerable time, at a temperature even above the natural heat of the milk. The following description of the dairy management of Mr. Harding, at Compton Dando, Somersetshire, is given by the deputation from the Ayrshire Agricultural Society, who visited the farm in 1854. The milk is poured from the pails through a sieve into a receiver outside, from which a pipe conveys it through the wall to the cheese-tub or to the coolers. A canvas bag is also placed over the inside end of the pipe, so that a double precaution is used against impurities entering with the milk.

"The rennet is prepared much in the way that it is done in many Ayrshire dairies. Mrs. Harding steeps five vells at once, and this usually suffices for two weeks, in which time about 21 cwt. of cheese may be made. The vells appear to have been carefully cleaned and preserved..

"Immediately after the morning milking, the evening and morning milk are put together into the tub. The temperature of the whole is brought to 80 degrees by heating a small quantity of the evening milk. In spring and towards winter a small quantity of annatto is used to improve the color of the cheese. It is put into the milk along with the rennet at seven o'clock. After the rennet is added, an hour is requisite for coagulation. At eight o'clock the curd is partially broken and allowed to subside a few minutes, in order that a small quantity of whey may be drawn off to be heated. This whey is put into a tin vessel and placed in a boiler in an adjoining apartment, to be heated in hot water. The curd is then most carefully and minutely broken, and then as much of the heated whey is mixed with it as suffices to raise it to 80 degrees—the temperature at which the rennet is added. Nothing more is done to it for another hour.

"A little after nine o'clock a few pailfuls of whey are drawn off and heated to a higher temperature than at eight o'clock. The curd is then broken as minutely as before, and after this is carefully done, an assistant pours several pailfuls of the heated whey into the mass. During the pouring in of the whey the stirring with the breakers is actively continued in order to mix the whole regularly, and not to allow any portion of the curd to become overheated. The temperature at this time is raised to 100 deg., as ascertained by the thermometer, and the stirring is continued a considerable time, until the minutely broken pieces of curd acquire a certain degree of consistency. The curd is then left half an hour to subside.

"At the expiry of the half hour the curd has settled to the bottom of the tub. Drawing off the whey is the next operation. The greater proportion is lifted in a large tin bowl, and poured through a hair sieve into the adjoining coolers. As it runs into the leads it appears to be very pure. When the whey above the mass of curd is thus removed, a spigot is turned at the bottom of the tub, and the remainder is allowed to drain off, which it does very rapidly without any pressure being required. To facilitate this part of the work the tub is made with a convex bottom, and the curd is cut from the sides of the tub and placed on the elevated center. It is carefully heaped up, and then left for an hour with no other pressure than its own weight. After this interval it is cut across in large slices, turned over once on the center of the tub, and left in a heap as before for half an hour. The whey drips away towards the side of the tub, and runs off at the spigot; and no pressure being applied, it continues to come away comparatively pure. After undergoing these easy manipulations, and lying untouched during the intervals that have been mentioned, the curd is ripe for the application of pressure. But great care is taken not to put it into the vat to be pressed at too high a temperature. If the heat be above 60 deg., and it usually is higher at this time, the curd is broken a little by the hand and thrown upon a lead cooler, until it is brought down to the desired temperature.

"The after-management of the cheese resembles that of Cheshire. A little salt, 1¼ lbs. per cwt., or thereabouts, is added to the crumbled curd, and it is mingled and broken by the curd mill. The cheese vats are placed under the machine, and are piled one above the other as the curd falls down. A cloth is put over each vat when the breaking is over, the curd is reversed in the cloth, put back into the vat, covered up, and placed in the press for about three-quarters of an hour. After this, the cheese is taken out, and a cloth wrung out of warm water is put on it. It is again changed at two and at six o'clock, after which dry cloths are put on it. Care is taken that the cheese fills the vat properly. To accomplish this, the vats, at making up, are filled rather full, and the edges of the cheese are pared in the afternoon. Next morning the cheese is rubbed on both sides with salt, and the same cloth is put on again. On the third morning it is treated in a similar manner. The cheese is put into the vat without a cloth on the fourth morning, and a little salt is rubbed over it to keep it from adhering to the wood. After the fourth morning it is reversed in the vat, without a cloth, each morning until the process is complete, about the sixth or seventh morning.

"We may mention here that Messrs. Cokey of Frome, make an apparatus by which a jacketed cheese tub of tin may be surrounded by a stream of hot water, and so the milk and whey retained at any temperature that is required, without the necessity of removing large quantities of milk or whey to a boiler every time of cheese-making for the purpose of being heated."

THE PLEURO IN NEW-JERSEY.

Mr. D. B. Logan writes to the Tribune as follows, under date of Morristown, N. J., May 31:—

I was present to-day at an examination of two animals that died of pleuro-pneumonia.

The disease is at Chatham, about eight miles from this place, and at Newark, on the farm of Abram Johnson.

The history of the disease at these places, as near as we can learn, is this. During the summer of 1858, Mr. H. L. Jacobus bought some twenty young cattle in New-York, which he brought home, and turned into pasture, some three miles from Chatham. It was about three weeks after when Mr. J. again saw them, when, to his surprise, he found two dead, and two or three others sick. They were at once placed in separate pasture, and none of these have since had the disease. During the same fall, Dr. Munn of Chatham, bought three heifers from this lot of healthy cattle, yarding them with his other stock. Soon after which the disease made its appearance among some of his older animals—four dying very soon after, and others taking the disease, but recovering.

From Dr. Munn's yard it was communicated to that of Mr. Lum, by driving a cow there, where she remained but a short time. Mr. Lum has since lost six cattle; four others which had the disease, he thinks have recovered, and one is now suffering from it, but with a prospect of recovery.

From these yards it spread to six others—each of them losing from one to five animals—making twenty-four deaths in all in this place. There are now but two cases in the place; and it is hoped that, with proper care, it may be confined to them.

The cases at Newark are also traced directly to cattle brought from New-York. Mr. Abm. Johnson, a farmer and dairyman, living about one mile from Newark, on the road leading to Elizabeth, bought in Browning's yards in New-York, about the 20th of December last, six spring calves, and took them to his farm, where he then had some sixty head.

About six weeks after receiving these calves, one of them was taken sick, refused its feed, and showed all the symptoms of the disease as it exists in Massachusetts. After lingering about two weeks, it died. Two weeks after, a cow was taken in the same way; she also lived for about two weeks. About three weeks after, three others took it, and new cases have been frequent up to this time. Mr. Johnson has lost four animals, has had five cases which he thinks have entirely recovered, has now five sick, and one was killed to-day for examination, making fifteen cases in all on his place. Early in May of this year Mr. Johnson sent forty-two head of his cattle, including the five remaining calves from Browning's yard, to Newfoundland, Morris Co., to pasture for the summer. At that place there were large tracts of uninclosed lands, on which large numbers of cattle were pastured during the summer, and these cattle, it is feared, may, by coming in contact with hundreds of others, spread the disease over a wide extent of country. Mr. Johnson, at the time of sending these cattle to pasture, was not aware of the nature of the disease, and has not since heard from them.

I was present to-day at an examination of two animals on his place—one a bull that died yesterday, the other a cow killed to-day, for the purpose of examination. The autopsy was conducted by Dr. C. C. Gryce, V. S., of New-York, in presence of Drs. George A Quimby and Woodruff of Morristown, and Drs. Ward and Peck of Newark. Gov. Olden of our State, Mr. Halstead, President of the State Agricultural Society, A. M. Tredwell, Esq., of Madison, Benjamin Haines, Esq., of Elizabeth, and some twenty other gentleman, principally interested in stock raising, were also present. The bull that died yesterday was the first animal examined, and after him a cow that had been sick one week. Both cases presented every indication of the disease existing in Massachusetts, and were pronounced by Dr. Gryce, as well as the medical gentlemen present, unmistakable cases of pleuro-pneumonia. The cases examined at Chatham presented the same convincing proof, and we are too well satisfied that we have the dreadful plague already in our midst.

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[For the Country Gentleman and Cultivator.]

PROTECTION FROM RED ANTS.

Messrs. Editors—"A Distressed Housekeeper," in Co. Gent. of May 10th, inquires for a mode of exterminating red ants. I have found the following remedies very efficacious: Either throw some twigs of tomato vines around your closets, or obtain a small quantity of corrosive sublimate, which dissolve in alcohol, and apply with a feather in the crevices and corners of the shelves. The former remedy is simple and free from danger, particularly where there are children. If the latter be tried, pray caution them to label the bottle "*poison.*" The suggestion may appear unnecessary, but a case in point occurred a day or so ago with one of our neighbors of carelessness with strychnine. A Lady Reader.

Meadow Bluff, Va.

Messrs. Editors—If "A Distressed Housekeeper" will put black walnut shelves into the closet in which she keeps her sugar, cake, &c., she will have rest. Some ten years ago I went to my closet to get a sponge cake, and found it covered with those little pests, the red ant. Not knowing what to do with it, I laid it down on an old black walnut table close by, and in less time than it has taken me to write this, the ants left the cake and table. I immediately took the hint, and put walnut shelves into my closets, since which time there has not been an insect seen. T. B. P. *Easton, Pa.*

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[For the Country Gentleman and Cultivator.]

LAYING TILE.

Last fall I laid over four hundred rods of tile. I used a ditching plow. The cost per rod for opening the ditch, averaging 2¼ feet in depth, did not exceed nine cents, including the cost of the plow. A portion of the subsoil was a stiff clay—the rest a kind of hard-pan, which would require to be picked if dug by hand.

The best way I could find to lay the tile—in fact the only way when the ditcher is used, was to dig and lay and fill in the main drains first, for reasons that are self-evident at the very outset to one using this implement. To fill the ditches I used one horse before a common plow set for three horse plowing, going six times around the ditch when on sod ground, and three when on stubble.

Tanglewood, N. Y E. J. P.

Notes from the Connecticut Valley.

Franklin County, Massachusetts, has a population of 32,000, and the number of its Farms is stated at 2,500. The region along the Connecticut—together with the townships of Northfield and Sunderland on the east side—includes the best farming districts it contains, and the naturally irrigated Deerfield meadows are often referred to when the subject of "inexhaustible soils" comes up for discussion.

It is to the part of the county that lies more immediately in the vicinity of Greenfield, that the following remarks will especially apply. In the last number of this paper we acknowledged in advance our indebtedness to J. S. Grennell, Esq., with whom we had then just had the pleasure of passing two or three days, for the opportunity of driving about among the farms in that neighborhood, and for much of the information which it is the object of these notes to place before the readers of the Co. Gent. We can only venture, however, upon a very general outline in connection with some of the chief points of interest involved, prefacing the attempt by remarking that we shall be glad to have our correspondents take up any part of the picture thus imperfectly sketched, either to supply missing details, or to correct what may be inapplicable in any particular locality.

Greenfield, then, to start with the capital of the county, is a village of about 2,500 people, beautifully shaded, like so many others of the early settled localities in this part of New-England, by fine trees that have grown old in the public service. It is the center of considerable business—one or more cutlery establishments, for example, employing numerous hands, while some of the best cassimeres and doeskins of American make, come from the Greenfield Manufacturing Company's extensive Mills. The manufacture of infant's carriages has become also quite an important item; turned out at a cost varying with their style, of from $8 to $25 a piece, they bring considerable money into the place, from which they find sales all over the country.

Agriculture here depends mostly for its pecuniary returns upon the dairy and the meat it produces. Greenfield sends more stock to Brighton than any other one station in the State. Almost every farmer markets more or less butter. All the farm work is done by oxen. Hence the cattle constitute a leading feature, and as such we shall refer first to

The Live Stock of Franklin County.

The Short-Horns.—It cannot fail to be a question of general interest—in view of the three requisites which this region demands in its cattle—as to which breed answers most nearly the common want. Many of our readers will already have anticipated the response. And it is just to add that, so far as we are aware, there have been no peculiar circumstances in the case to explain the present popularity of the Short-Horn, beyond its being the "right animal in the right place." Moreover, other breeds seem to have had, or to be now in the progress of having, a fair trial side by side with their more successful competitor.

Perhaps the first bull of this breed introduced in the vicinity was one presented to Hon. Geo. Grennell, more than twenty years ago, we believe, called "Governor," and which, although possibly not wholly of pure blood, exerted a favorable influence upon the size and character of his progeny. But the most good done by any one animal whose stock was ever brought into the county, is ascribed to "Northumberland," (4596 E. H. B.,) bred by E. P. Prentice, Esq., of this city; Mr. Childs, of Deerfield, had a bull sired by him, and all accounts agree in rating the descendents from this source as unexcelled, either in milking properties or in tendency to take on flesh, by any other strain of which crosses have been made. It is a not unimportant corroboration of what some are inclined to disregard or laugh at—the value of pedigree—that is, of long inherited and well established excellence, even in producing grades—to find, after a lapse of so considerable a period of time, the offspring of one particular animal, upon the common stock of a neighborhood, still attracting attention by their superiority, and thus vindicating those great truths that lie at the basis of successful breeding for all purposes.

The great body of the stock of the county, as has been intimated, are Short-Horn grades; there are perhaps half-a-dozen herds, smaller or larger, of pure-breds—such for example as that of Messrs. J. S. and Geo. Taylor, at Shelburne, and, among Shelburne farmers, who appear to be generally noted for their cattle, one finds every where the plain impression of Short-Horn blood. Beside the gentlemen named, there are the Messrs. Wells, Stebbins, and others whose stock was referred to in high terms. The Short-Horn is better known here as the *Durham*, and, according to locality, the character of the animals with which it has been crossed, &c., has frequently acquired other appellations for different grades, such as the "Red Durhams," the "Connable breed," &c., while the designation of "Hoosic Valley" stock is given to Short-Horns and grades descended from bulls that came from that locality at about the same time, I believe, that the "Northumberland" blood was first introduced.

More recently the county of Franklin has derived much benefit from the herd of Paoli Lathrop, Esq., at South Hadley, from which, and other sources, its Short-Horn stock has been replenished from time to time, and the character of its grades been constantly growing higher and higher.

It is of Durham grade not only that we find marks in most of the cattle that are marketed, but from it also that there frequently springs a remarkable instance of size and fattening capacity. Witness a six year old ox, now belonging to Mr. J. S. Sanderson of Bernardston, whom we should have visited but for the rain, which weighs 3,300 lbs. and was described to us by a gentleman who had just seen it, as still feeding with a good appetite and likely rather to increase than to retrograde. Mr. Grennell said he had never seen an animal "so fat and so symmetrical, the flesh so evenly laid on and the fine points so well developed and preserved." Other instances worthy of note, are three yoke of cattle fatted last winter by Jno. Ashley of Deerfield, five and six years old, live weight respectively 5,200, 5,000 and 4,975 lbs.—the lightest pair having been worked all the preceding autumn. The Messrs. Anderson, of the same town if we are not mistaken, had about the 1st of Feb. a pair of steers past three years old, which had then had meal for only about a fortnight, and would turn the scale at 3,400 lbs.

Herefords.—This breed is by no means without its patrons, whose number, indeed, we inferred to be slightly on the increase, although with respect either to milk or to early maturity, it did not seem to claim a full equality with the Short-Horn. Messrs. A. & J. A. Clark of Greenfield, T. J. Field of Northfield, T. J. M. Smith of Montague, (whose absence from home at the time of our call, we regretted,) are among those who have devoted most attention to the breed in question, and among the North Bernardston farmers it is said that there is considerable Hereford blood intermingled with various other crosses.

Devons and Jerseys.—Most of the Devon blood in the county probably exists in combination with that from other sources, as it is not thought to answer well alone with regard to size, although like the Hereford, working oxen of this breed may be quicker and better matched. It is not an object generally, however, to train steers with that degree of care which is exercised where they are used for labor all their lives; the more usual practice being not to work them over two seasons, when they are converted into beef. Steers, never worked, they want to make as large as possible by three years old, so that they may then be marketed; hence, as above remarked, Short-Horns have the preference. The Jersey or Alderney cows are in good repute for the dairy, and there seems to be more of the blood in the county than we were quite prepared to anticipate, but their ugliness as beef "critters" operates much to their prejudice.

Sheep.—Mr. Grennell has made considerable effort to promote an extension of interest in this direction. We understood that sheep feeding had recently paid rather better than that of cattle. The tide seems to have turned in favor of the larger and middle or coarse wooled breeds. South-Downs are considered to stand rather at the head, but a number of Cotswolds have also been introduced and apparently suit the climate—proving thrifty, and bringing a good sized lamb at three or four months, which will sell for $5 or $6 at that age, and pay better than to keep them longer. It is an object, of course, with such lambs to have them come in as early as possible in the season. Mr. G. is trying the Oxford Downs, and thinks they will serve an excellent purpose, in crossing upon the ordinary sheep known as the "Irish Snut"—which has probably been in the county 70 or 80 years, of untraceable origin it appears, but a good sized, prolific, hardy sort of sheep, making good milkers and mothers. The wool will fetch from 30 to 38 cents, according to circumstances, but meat is a more important consideration.

Swine.—There are a good many Suffolks in the county; Mr. Grennell within a year or so has procured some of the Chester County breed through Paschal Morris of Philadelphia, which promise, he thinks, to give still better satisfaction.

Horses.—A good deal of attention has been devoted to this subject through this region, and it has produced some admirable Black-Hawk and Morgan stock.

General System of Farming.

Perhaps it is a fair estimate of the farms of Franklin county to rate them in size at an average of something like 140 acres—two-thirds of which area would probably be found in continual pasture. As a farm grows larger, however, the proportion of pasture land increases, and while it might not be more than half of one of 80 acres, it would occupy upwards of two-thirds the area of a farm of more than the average extent. Of the fields not in pasture, from one-half to two-thirds again—probably fully the latter proportion—is in meadow or hay land. Some of the Deerfield meadows are tilled year after year; it is a common thing, too, to take corn two years, and then grass one year, and so on. Since potatoes have failed, there are fewer of them planted. Spring wheat, rye, a few oats, &c., are grown, about to meet the home wants of the community. A large quantity of the best hay is cut, but none marketed beyond the village demand, as it is otherwise consumed upon the farm.

In illustration of these statements, Mr. Grennell was good enough to give me the following facts with regard to the practice of one or two farmers, of whose operations he had recently communicated an outline to the Gazette and Courier, published at Greenfield. The Messrs. Stebbins have a farm of 185 acres in Conway, "of which perhaps 45 are mowing and tillage, and the remainder pasturing. They cut over 50 tons of the best of hay, taking especial pains to cut it early; timothy just as it begins to blossom, and clover before any heads turn; the hay is sweeter and more nutritious, produces more milk and more fat. They raise four acres of corn, averaging 75 bushels to the acre, all of which is fed on the place. From two acres of oats they had 80 bushels; four acres of rye yielding 92 bushels, and they annually market about 50 barrels of apples. Maple sugar is a great crop with them, going as high as 1,500 to 2,000 pounds a year." They keep through the winter about twenty-five head of stock, and had in April "one pair of splendid dark red cattle which would weigh about 4,500 pounds, ready for market, and two yoke of handsome steers, then coming three years old;" also one yoke of heavy working oxen, and eight milch cows, one of them the mother and another a half-sister of a big steer sold by Mr. S. a year before, which weighed alive something over 3,200 pounds and dressed 2,462 pounds, when weighed two days after butchering.

Here "all the straw and stalks used for litter are cut before using, so that their long manure in the spring is short manure, and is easier handled, and saves forks enough to pay the entire trouble. They cut their oats when barely half turned in the field; the oats are heavier, and the straw as eagerly eaten by stock as the best hay."

Another farm to which we may briefly refer, is that of Mr. Isaac Barton of Greenfield, who is also an advocate, like Mr. Stebbins, for the early cutting of grass. He thinks "there is no fault so general among farmers as allowing their grass to stand too long before cutting; by mowing earlier it is true they don't get so much bulk, but the hay will contain more nutriment, will produce more flesh and more milk, and the rowen or second crop will be enough larger to pay the difference." Mr. Grennell also notices the mixture of meal which he feeds to his growing stock as "especially commendable:—to a half bushel of rye, a peck of corn, and a peck of oats, he adds three quarts of flax seed, and grinds them together; this makes a rich, nourishing provender, free from some of the objections to feeding clear corn meal. Flax seed can be bought at from $1.65 to $2 per bushel, and a small quantity will yield as much nutriment as a larger amount of such oil meal as we get at the present day."

Improvements.—One of the chief improvements in the Farming of the county is thought to be in the better plows and plowing that have been introduced of late years. They now turn over seldom or never less than seven or eight inches instead of three or four. Other implements, too, particularly harrows, horse-hoes, and cultivators, have been improved, and the use of mowing machines and horse-rakes has become almost universal. Mr. Grennell thought that the "Tedding Machine," or Hay maker and spreader, would be an important implement here, and that it would undoubtedly soon come into use.

Fruit.—The growth of Fruit has much increased, and

10,000 trees, mostly apples, have been set out the present season in the vicinity of Greenfield. Upon Mr. Grennell's farm there is a thrifty orchard of a thousand trees from five to fifteen years old—apples, with the exception of about 75 pears and 100 cherries. Peaches here were formerly fine, and as an illustration of the fact that the soil once seemed to possess some virtue for them it has not at present, it was mentioned in conversation, that a chance seedling on Mr. G.'s place once produced fruit 11¾ inches in circumference, which was shown at one of the Worcester Horticultural Society's Exhibitions.

Among the village residents in Greenfield and elsewhere, the pear is more and more becoming a garden favorite, and dwarfs and grape-vines are finding a place about a large proportion of the homes of the professional and business men, mechanics and others, who have a plot of ground that can be made to admit them. There is some difficulty in explaining why the peach has become so tender and rarely productive, but the dwarf pear seems to be uniformly successful when taken care of.

Potatoes.—It is preferred now to choose for the potato the lighter soils and to seed thin. Mr. Grennell tried Howatt's "One-Eye System" with great success, and had modified his practice to some extent accordingly, although without having altogether carried it out since the first experiment. The Carter—formerly standing at the head as a potato for the table, there, as elsewhere, has lost its size, and will produce with difficulty fifty bushels an acre. At the present time the Davis Seedling appears to rank as first in yield, quality and soundness—rather improving than otherwise as the season advances. The Prince Albert and State of Maine are also first class varieties, but do not produce so well as that last named, and the Mexican is thought to be unrivaled as a baking potato. The sort known in New-England as the Peach Blow, is evidently quite a different thing from that now so popular in New-York, and in no respect worthy of the reputation acquired by the latter.

Other Notes.—There are some other Notes which we had intended to present more at length, but which the limit already reached warns us to condense into as little space as possible. Among the measures of improvement which the Agriculture of the County has seen progressing by degrees, there are several which should not be overlooked. More attention is now given to manures. The application of artificial fertilizers has received a practical test at the hands of many, and they now occupy an established position as they should—not as the mainspring but as an adjunct of good farming. Draining has here and there been tried, and there is a manufactory of Tile in Whately. Root crops, particularly the mangold, are coming more and more into notice, and carrots and turnips are grown to a considerable extent. The capacious barns, well adapted for the purposes of their agriculture, afford us another opportunity of adding a credit mark to the account of Franklin County farmers—including often, as they do, facilities for the feeding of stock, the management of manure, the cooking of feed and the protection of roots, and sometimes also a warm corner for the poultry, a work-shop for repairs, and apartments for the storing of harness, or implements, or vehicles. The proper care and feeding of young stock as well as old, both small and large, has been discussed with intelligence and spirit. The use of oil cake finds its only obstacle in the adulterations to which dishonest dealers subject their patrons, and the proposed substitution for it of flax seed itself, as described in the practice of Mr. Barton, above alluded to, is a suggestion which we cannot allow to pass without calling to it the more particular regard of those of our readers who are placed in similar circumstances. Upon the points which we are touching in this paragraph, all and severally, as well as those previously spoken of more at length, we again bespeak the assistance of our correspondents in supplying the deficiencies or correcting the unintentional errors they may discover. It affords us pleasure to anticipate, hereafter, an opportunity of noting down some of the more prominent points in the Winter Farming of this region; but, meantime, in the operations of the Summer and Autumn, there is much that might be contributed, with general advantage, to the columns of the Country Gentleman, out of those stores of experience which the thrifty cultivators of the Connecticut Valley have been so long accumulating.

In closing here, we are passing by several Calls of interest, either proposed or accomplished. Drives, in sun or showers, over the hills that look down upon the flats, or winding between fields already promising of remunerative yield. Walks under the elms and horse-chestnuts and maples; and views over the rolling landscape, bounded by the distant heights in which New-England scenery is never wanting of its share, or—in singular contrast with many of its forms,—those two vistas—upper and lower—of alluvial verdure, between which Deerfield nestles in the shade of its grand old avenue. A fishing excursion to Turner's Falls, and the picnic-ing in which we there surprised one of our most esteemed Deerfield subscribers—a phase of Massachusetts farming which on the spot we threatened to expose. The dace and other finny stragglers which we did *not* beguile; the relics of the old masters of the soil we brought away; the tales of that border warfare that once reddened the wild rapids, now dammed and straight-jacketed and put to good practical purposes, as all the forces of earth at this age certainly should be. Of this and more, even these allusions are unnecessary and may be out of place.

But a word for the Trees is never mistimed. Owing to the impulse of prizes offered under the auspices of the Franklin County Agricultural Society, 1,255 sugar maples have been set out by the road-sides during the past year—Daniel Ballard of Wendell, Cyrus Holton of Northfield, and Alfred Belden of Whately, heading the list in these legacies for the enjoyment of another generation. Let the sons of New-England begin to appreciate the advantages of their position as it strikes the eye of a stranger, and we shall hear from fewer fathers the troubled question, "Why do our Young Men leave the Farm?"

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THE CATTLE DISEASE.

Much of our space will still be found occupied by the Pleuro-Pneumonia. We think, however, that the time has arrived when we may venture to indicate conclusions with a fair degree of certainty, and a tolerable probability of their being received as impartially as they will be given. We hope, and believe that we may safely expect, to hear less of the disease in future. It has never been our opinion that there was anything to call for general alarm, and the tendency appears to be toward a more calm and dispassionate view of the affair in those districts which have hitherto been the sufferers.

1. As to the character of the Pleuro-Pneumonia, it is very

important that the now well-established fact of its being virulently *contagious*, should be borne constantly in mind. It is also proved that it may be communicated by *infection*, that is, that the places occupied or the food breathed upon by diseased animals, will give it to others, especially if tainted with the mucous discharge characteristic of its more advanced stages. That there is anything essentially *epidemic* in the Pleuro we very much doubt, although it appears certain that cases of it may spontaneously occur where circumstances are such as peculiarly to predispose the system to its attacks, and it is probably equally certain that there may be atmospheric, climatic or other peculiarities especially favorable in certain seasons or localities to its prevalency or violence.

2. Keeping these facts in view, we remark in the second place, that the Pleuro-pneumonia is *no new thing in this country*. In support of this assertion we refer to the letter from E. P. Prentice, Esq., on page 396—showing the course it ran in his herd five or six years ago, and the measures which in the end accomplished its extinction. If Mr. Chenery could have secured the services of some one acquainted with these facts, at the time of the first outbreak among his cattle, his own losses might perhaps have been partially prevented, and, at any rate, the vast expense and anxiety to which the whole State has since been put, would have been spared. The great lesson, to which we wish to call particular attention, not only as illustrated in Mr. Prentice's experience, but also as directly pointed at in all the testimony taken before the Massachusetts committee, is, then, *that the only safety lies in isolating the different members of an infected herd*, and that the disease may be thus in no very long time wholly driven out.

3. Under the circumstances of the case in Massachusetts, for a little outline of which see the letter from our Boston correspondent—we think the action of the Commissioners should receive the cordial support of the public. The laws enacted by the Legislature are calculated to restore public confidence, and the report of the investigations now concluded, will diffuse just the needed information over the country, so that we hope to hear no more of the *spread* of the disease, for, should it anywhere appear, the means of keeping it in check are entirely within the reach of all.

4. It may be remarked, however, that there should be little confidence reposed in the numerous rumors of its breaking out here and there, over the country, for any affection of the lungs or other ordinary illness among cattle will be very likely to be represented as the pleuro-pneumonia for some time to come. Unless the opportunity for the influence of contagion or infection is clearly known to have occurred, the *presumption is, in every such instance, that something else is the matter*. If there is real cause for suspicion, let the endangered herd be at once separated—one, or at most two or three animals by themselves in any one field or building, and kept thus isolated at whatever cost of time and trouble, until the whole danger has passed by.

5. We trust that the Massachusetts Commissioners will at once carry out the provisions of the law for the establishment of a hospital or quarantine, by the adaptation to this purpose of some farm and range of buildings where the disease already exists, and where it may be fully studied, both in its own developments and in the action of the contagion and infection upon healthy animals introduced for the purpose of experiment, and which need by no means be of an expensive kind. The poor-house establishment at New-Braintree, where we witnessed last week the examination of some infected cows, would afford a good spot for the purpose, and investigations might there be conducted, which, so far as our reading has extended, have no prototypes in Europe with all that has there been said and done upon the subject.

6. When such a hospital is once known to exist, accessible to the visits of interested scientific and practical men, it will be very well that delegates from other States should have the opportunity of acquainting themselves thoroughly with the disease, so as to be able to distinguish its symptoms from those of other complaints. There will then be some one in every locality, who can be called in quietly where attack is suspected, and at once either put down unnecessary fears or take proper measures to meet the exigencies of the case, without application of any sort to official authorities, or crying out through the papers that the whole cattle of a town or county are dying, before it is really ascertained whether there is one that is seriously ill. Some one qualified medical observer will be better for this purpose than three or four uninstructed and less capable visitors who would go and return in a day or two really no wiser than they went.

— As to the present condition of affairs in Massachusetts, the more light we can get upon the subject, the more we incline to the opinion that for two months back there has been little reliable evidence of the extension of the disease beyond the limits it then occupied. After a state of general commotion, whether well founded or not, there generally comes a season of calm, and unless we much mistake the tendencies of the public mind, the excitement upon the Pleuro-pneumonia has already passed its highest point. We do not *know all about it*, even now, it is true; but we know so much that we have no longer an ill-defined goblin to contend with, but an enemy, sufficiently ugly, we do not deny, and by no means to be despised—but still one which, if properly restrained and imprisoned, will work out, in a great measure, his own extinction. Without neglecting caution, there is no reason for lack of courage; and it is our earnest recommendation, as the best source of public security, that each man attend as judiciously and earnestly as possible to the welfare of his own stock, without inundating the public with surmises, or depending upon Commissioners to kill or cure in his behalf, and upon the public treasury for a premium upon any complaint which he can distort into the guise of this troublesome and noisy invader.

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The Pleuro-Pneumonia here Six Years Ago.

The following is the important letter from E. P. Prentice, Esq., of Mount Hope, near this city, to which we allude particularly in the leading Note upon page 400 of this number of the Country Gentleman:—

Messrs. Editors—I notice that a good deal of alarm is felt in different parts of the country about what is called the cattle disease.

From the diagnosis given in the papers, I have no doubt this is Pleuro-Pneumonia, with which I had some acquaintance a few years ago. If it is the same, my observation and experience may be of some service to those suffering now.

It was introduced into my stock in the fall of 1853, by one of my own cows, which in the spring of that year I had sent down to my brother in Brooklyn, to be used during the summer for milk. She was kept entirely isolated throughout the summer, and in November was sent up by the boat. There were no other cattle on the boat at the time, nor could I learn that she had come in contact with any in passing through the streets on her way to the boat, and she certainly did not after leaving it, until she mingled again with her old companions, all of whom were then and long afterwards perfectly healthy. After she had been home about two weeks we noticed that her appetite failed, and her milk fell off; she seemed dull and stupid, stood with her head down, and manifested a considerable degree of languor.

Soon her breathing became somewhat hurried and with a very decided catch in it; she ground her teeth, continued standing, or if she laid down it was only to jump up again instantly. Her cough increased, and so too a purulent and now bloody discharge of mucus from her mouth and nostrils. The excrement was fetid, black and hard.

In this case we twice administered half a pound of epsom salts, and afterwards a bottle of castor oil. Very little but a temporary effect was produced by these doses.

The symptoms all increased in intensity, strength diminished, limbs were drawn together, belly tucked up, &c., until the eighth day, when she partly layed and partly fell down, and never rose again.

In a post-mortem examination, the lungs proved to be gorged with black, fetid blood, the substance of them to be thickened, soft and pulpy. The pleura and diaphragm also showed a good deal of disease and some adhesion.

This cow on her arrival here was put into her usual place in the stable, between others. She remained there for two or three days after she was taken sick, before we removed her to the hospital.

In about three weeks from the time she died, one and then the other of those standing on either side of her were attacked in the same way, and with but two days between. This certainly looks very much like contagion, but my attention had not before been called to this particular disease, and to suppose inflammation or congestion of the lungs contagious, was so opposed to my preconceived notions that I did not even then admit it, and these animals were suffered to remain with the others until their own comfort seemed to require the greater liberty of open pens.

One of them was early and copiously bled twice, while epsom salts were administered both by the stomach and with the injective pump. The other we endeavored to keep nauseated with ipecacuanha, and at the same time to keep her bowels open by cathartic medicines. All proved to be of no avail. They both died, the one in ten and the other in thirteen days. Before these died, however, others were taken sick. And thus later I had eight sick at one time.

The leading symptoms in all were the same, with minor differences, and so too was the appearance after death on examination.

Of all that were taken sick (sixteen) but two recovered, and they were among those we did the least for, after we had become discouraged about trying to cure them. In all the last cases we made no effort at all, but to keep them as comfortable as we could.

In one case the acute character of the disease changed to a chronic, and the animal lived six or eight weeks, until the whole texture of the lungs had become destroyed. She had become much emaciated, and finally died with the ordinary consumption.

At the time the first case appeared I had a herd of thirty-one animals, all valuable Ayrshires, in fine condition and health. In all the first cases I had a veterinary surgeon of considerable celebrity and experience, and every ordinary approved mode of treatment was resorted to and persevered in. The last cases, as before intimated, we only strove to make comfortable.

After I paid the third or fourth forfeit, I began to wake up to the idea that the disease was in a high degree contagious, whether I would have it so or not, and that my future security was in prevention and not in remedy. I therefore separated all the remaining animals, in no instance having more than two together, and generally but one in a place.

All were removed from the infected stables and put into quarantine. Isolated cases continued to occur for some weeks after this, but the spread of the disease was stayed, nor did a single case occur after this, which we did not think we traced directly to previous contact.

It is impossible to account for the first case of which I have spoken. But as the cow in that case was put into a sales stable in New-York while waiting for the boat, though there were no cattle then present, yet I have supposed it not unlikely that diseased animals had been there, and had left the seeds of disease.

But account for this case as we may (and I have no doubt it is sometimes spontaneous,) I feel convinced it is very highly contagious, and that the only safety to a herd into which it has been introduced, is in *complete* isolation, and in this I feel, as convinced, there *is safety.*

My cattle were not suffered to return even to the barn-yard, or to any part of the cattle barns, except as invalids were sent to the "hospital" to die, until late the next fall —i. e. the fall of 1854. In the meantime the hay and straw had all been removed, the stables, stalls, cribs, and all, thoroughly scrubbed with ashes and water, fumigated and whitewashed with quick lime. I have had no case since, and am persuaded I should have avoided most of those I had before, if I had reasonably admitted the evidences of my senses in the second and third cases.

Mount Hope, June 14, 1860. E. P. PRENTICE.

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MR. ALEXANDER'S SALE.

The sale took place as advertised, on the 13th inst. The threatening aspect of weather in the early morning changed about 10 o'clock, and the day proved a delightful one. The attendance was large, and contained a sprinkling of breeders from Ohio, Indiana, New-York and Connecticut. The prices were higher than realized last year, as the stock was also of better quality. It will be seen from the following statement, that several animals found Eastern purchasers:—

COWS AND HEIFERS.

1.	Orba 2d, Robt. Clarke, Ky.	$100.00
2.	Mary Ann 18th, G. W. Anderson, Ky.,	77.50
3.	Many Ann 20th, J. B. Dun, Ky.,	125.00
4.	Mary Ann 22d, S. W. Robbins, Conn.,	150.00
5.	Chance, 5th, S. W. Robbins, Conn.,	205.00
6.	Pearlette 2d, J. S. Johnson, Ky.,	295.00
7.	Mary Cattley 2d, Ezra Cornell, N. Y.,	130.00
8.	Prune 3d J. B. Dun, Ky.,	85.00
9.	Emma 2d, J. O. Sheldon, N. Y.,	200.00
10.	Filligre 4th, J. O. Sheldon, N. Y.,	190.00
11.	Pearlette 3d, S. W. Robbins, Conn.,	205.00
12.	Maid Marion 5th, S. W. Robbins, Conn.,	235.00
13.	Rosamond, E. Cornell, N. Y.,	200.00
14.	Lilla Languish, E. Cornell, N. Y.,	75.00
15.	Eveline, J. W. Jones, Ky.,	160.00
16.	Mary Allen, Mr. Shields, Mo.,	155.00
17.	Margaret Allen, Mr. Shields, Mo.,	70.00
19.	Idle Girl, Jas. O. Sheldon, N. Y.,	150.00
18 Cows and Heifers, averaging $152.63—total,		$2,747.50

BULLS.

1.	Lord Languish, Rankin Baldridge, Ind.,	$225.00
2.	Derby Duke, Merritt O'Neal, Ky.,	170.00
3.	Fitz Bell, Rufus Bryant, (Shakers,) Ky.,	102.50
4.	Juniper, John Monett, Ohio,	107.50
5.	Election, Mr. Shields, Mo.	80.00
6.	Marske, J. S. Wolfork,	165.00
7.	Volunteer, Jno. G. Dun, Ohio,	275.00
8.	Phantom, W. B. Hudson, Tenn.,	90.00
9.	Rataplan, D. S. Huffstotter, Ind.,	105.00
10.	Morisco, C. C. Crisman, Ky.,	87.50
11.	Zinganee, C. A. Stevenson, Ky.,	85.00
12.	Falconer, R. W. Scott, Ky.,	157.50
13.	Langar, J. R. Ward, Ky.,	205.00
14.	Mogul, R. G. Dun, Ohio,	330.00
15.	Peter, R. Weisiger, Texas,	75.00
16.	Marion, B. C. Bedford, Ky.,	360.00
17.	Fordham, John Ross, Ohio,	140.00
18.	York, J. B. Wilder, Ky.,	155.00
19.	Hopeful, Dodd Helm, Ky.,	50.00
19 Bulls averaging $153.42—total,		$2,915.00

S. T.

☞ To the account of Mr. R. A. ALEXANDER's late SALE, given above, should be added the Imported Bull "El Hakim," sold for $250 to J. R. Bryant, Pleasant Hill, Ky. A number of South-Down sheep not then reported, were also disposed of, and the following is a correct recapitulation of the whole:

20	Short-Horn Bulls sold for..	$3,165.00—	average per	head,..	$158.25
18	do. Cows & heifers,	2,747.50—	do.	do. ..	152.63
38	head of cattle,	$5,912.50—	do.	do. ..	155.59
9	South-Down Bucks,	391.00—	do.	do. ..	43.44
6	do. Ewes,	194.00—	do.	do. ..	32.33
	Total of all sales,	$6,497.50			

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[For the Country Gentleman and Cultivator.]

Charlotte Russe.

MESSRS. EDITORS—I will give you a recipe for Charlotte Russe, with the directions for making it, which I consider in a recipe quite as essential as the ingredients:

1 ounce of gelatine.
6 ounces of sugar.
Yolk of four eggs.
1 quart of cream.
1 pint of milk.

Dissolve a *little* less than one ounce of gelatine in a pint of lukewarm milk—then scald it, and put it upon the beaten eggs and sugar—stir them well together—set aside till it becomes lukewarm—then season it well with vanilla, (some use brandy also)

Whip the cream while the mixture is setting, and skim the froth as it forms. The day before make sponge cake—the weight of eggs in sugar, and half the weight in flour. MARY.

Inquiries and Answers.

Rose Bugs.—Will you please tell me through The Cultivator, what will protect cherry trees against the ravages of the rose bug—also when to slit the bark of such trees. J. S. Ewell. *Byfield, Mass.* [We know of no remedy for the insects but to kill them. When very numerous, they have been knocked off the trees on sheets and thrown into hot water. We are not aware of any advantage in slitting the bark of trees.]

Cedar Berries.—When is the proper time to gather the red cedar seeds? If gathered in the fall should they be exposed during the winter? R. [A suitable time is late in fall or during winter—they may be washed off the pulp and mixed with moist sand, exposed to frosts, and planted in spring. They will grow the first and second years.]

Plaster.—I wish to question in regard to plaster. In planting my potatoes, I experimented with plaster. On one half of the land I put a tablespoonful in each hill. The land seemed to be better than the other part; the season was dry, but the yield was much less where the plaster was used, than on the other and poorer part. I think the soil contains a mixture of iron. Would that have an effect upon the plaster? What is the opinion of your readers in regard to it? I have also sown plaster broadcast upon my mowland, and could perceive no benefit therefrom. Elihu Brown. *Blandford, Mass.* [On some soils, plaster is no benefit, and it is needless to apply it. We do not think it injured the potatoes, but that the diminution was owing to other accidental causes.]

Yellow Clover.—Enclosed you will find a specimen of the flower and stems of a species of grass which has rooted out the clover in my fields, and in those of some of my neighbors, and which I would like to know the name of. Supposing you would be likely to know, I send it to you with the request that you will give its name and the best method of eradicating it. I am plowing it under. J. W. D. *Mount Holly, N. J.* [The plant sent is the *Trifolium procumbens*, or yellow clover, an introduced foreigner, a somewhat troublesome weed in some places. Plowing under and good cultivation will eradicate it.]

Paint for Stopping Cracks.—I have an upper porch the floor of which leaks and lets the water down on to the lower floor, and it also leaks where it joins the house. Now will you tell me what to do with it? What kind of *paint* can I use on it, that will fill up the shrunken places, (pine,) and be permanent and cheap? M. *Marshall, Ill.* [We know of nothing better than white-lead paint, and where the cracks are large, the paint may be thickened to any desired degree my mixing in with fine clean sand—making it thicker according to the size of the cracks. This we have found excellent for all kinds of leakages in wood-work.]

Influence of the Moon's Shadow.—Some of the good old farmers here tell me there is a time, governed by the changes of the moon, for planting potatoes, transplanting shrubbery, laying fence, deadening timber, putting on house roofs, &c., &c. One thing tends to make me incredulous—that is, that some of the wise ones are governed by the changes of the moon—others by the ascent and descent of the sign. If the changes of the moon or the signs have any effect upon timber, vegetation, the soil, or anything else with which farmers usually have to deal, I should like to know what it is. Will you please inform me what the opinion of scientific men is on the subject. Young Farmer. *Va., June* 1860. [Our correspondent will perceive by a moment's reflection, that the mere circumstance of the sun shining on this or the other side of the moon, 240,000 miles off, could not possibly have any effect on the things of this world. Careful journals have been kept for years by scientific men, and no general result could be reached, although limited observations would sometimes bear towards one rule, and again towards another, as accident happened to lead. We are aware that some farmers have favorite notions on this subject, some one way and some another, and that being fixed in their belief, one accidental coincidence serves more to establish them, than twenty exceptions would do to upset their opinions. The light of the moon at night has been claimed by some as affecting vegetation—but as this light is but little more than half a millionth part that of the sun, a single day of sunlight would do more good than all the light of the moon from the days of Adam until now.]

Preserving Fruit in Alcohol.—Will you please inform me how to put up cherries, currants, &c., in spirits, so as to preserve and not take all the color out of them? I have tried brandy and diluted alcohol, but they take all the color out; and I have seen them colored very naturally, and would like to know how—and likely many of the readers of the Co. Gent. would be benefitted by the information. Subscriber. *Barnesville, Ohio.* [Will some of our readers who possess practical skill, please give us a description of the process, at an early day?]

Bone Dust for Turneps.—In last Co. Gent. a correspondent wishes to know what the effect of sulphated bones is on turneps. I have not used any of it, but have the dust. Last summer I sowed 200 pounds of dust on 70 square rods of ground. Product 200 bushels of the finest turnips that I ever saw—got plenty that weighed five pounds with the tops and roots cut off. Some of the seed came up where no dust was sown, and the turnips were not as big as a silver dollar; have used four tons of it on grass, and see the effects in a much greater yield. M. Gowdy. *O'Bannon's, Ky.*

Colebrook Seedling Potato.—A writer in The Homestead, speaks of this variety as an excellent table potato, especially for summer use. He says, "They are large, smooth, very productive, and free from rot. At this season, when potatoes begin to grow soggy and distasteful, these are dry as meal and pleasant to the taste." We would be glad to know more of this variety from those who have grown and used them. Tyro.

Sudden Death of Sheep.—As we have received much valuable information from the Co. Gent., I now write to solicit information on a subject that may perhaps prove pecuniarily interesting not only to myself, but to many of your readers. For the past few weeks I have been losing my sheep, and am at a loss how to account for their death. Those that I have noticed before death, have a frothing at the mouth and bowels much distended. They are in fine condition, and on opening them could find nothing indicative of poison or disease. We have lost sheep from eating Ivy, all of which turned green before they died, or in other words their flesh assumed a greenish hue. The flesh of those I have lost recently, has its natural color. We have examined the field, (which is clover and blue grass,) and could find nothing that I would consider poisonous to a sheep. Any information that you or your readers can impart on the subject, will be gratefully received.

Mont. Co., Md. Jas. E. Jones.

Black Ants.—Will the editor please inquire through the columns of the Country Gent., if there is any remedy for the common small black ant in gardens, as mine is almost overrun with them; the leaves of the flowers looking as if they had been pierced with an awl, and I can find nothing else to charge the destruction to but these ants. Mrs. D. C. Nye. [We have never been seriously troubled with ants, and therefore give briefly such remedies as we have heard recommended, with the request that our readers will furnish such as they know to be better: smear the inside of a vessel with honey, and invert it over their nests or places of most frequent resort, and when covered with them, jar them off into boiling water. Flour sulphur sprinkled on their haunts is said to repel them. Spirits of turpentine, poured on their hillocks destroys or disperses them. Bottles partly filled with sweetened water attract them, and imprison and drown them.]

Butter Dairy.—Will you please give in the columns of your journal a plan—with cost-estimate—of a butter dairy and ice-house, which will accommodate the milk of thirty to fifty cows. Situation, a hill slope on north side of dwelling. A small stream of spring water is near at hand which I can easily introduce into the house, and on the north a yard where I propose keeping my swine. A. B. [We should esteem it a favor if some of our readers in the dairy districts, who have given attention to the erection of such dairies as our correspondent inquires for, would furnish us a plan or design, with accompanying explanations and estimates.]

Blood Spavin.—I have a valuable mare who has a blood spavin (as it is called,) forming, and I would be glad to know if there is any cure, remedy, or relief for the disease. There is now a swelling of about the size of a hen's egg, near the center of the joint, which, after considerable exercise, will disappear, but return again with the usual stiffness while standing in the stable. Can anything be done to help it?

Bath, Me. K.

Hydraulic Ram.—Could you or any of your subscribers give through the Cultivator a description or an engraving of a hydraulic ram, capable of raising water 100 feet, with the price and where it can be bought? An Old Subscriber. [We have so often published engravings and descriptions of this apparatus that our best way is probably to refer the inquirer directly to the implement catalogue of almost any extensive dealer. For example, Emery Brothers, or W. W. Eggleston of this city, would probably supply him at once with all needful particulars.]

[For the Country Gentleman and Cultivator.]

OATS AND CARROTS TOGETHER.

Messrs. Editors—I notice in the Co. Gent. of May 17, Reporter wishes to learn the experience of those who have tried the experiment of raising oats and carrots together. As it is a rainy day I feel tempted to comply with the request, and give my experience upon the subject. It is some six years ago May 1, that, after sowing a piece of oats, I sowed about an eighth of an acre to carrots, by way of experiment. The ground was a sandy loam, in corn the year before, and well manured. The oats were sowed broadcast by hand, and the carrot seed by a seed sower. The oats were very heavy, and some of them lodged. After harvesting the oats, the horse and small plow were passed twice between the rows, which were about the distance we usually plant corn. The carrots were then carefully hoed and weeded by hand, and a little home-made poudrette applied to each plant, and the poudrette covered with a little loose earth. Little or nothing more was done to the carrots until harvest. Product, 51 bushels.

I have not continued the practice, because I do not think oats a profitable crop for me to raise, except where I wish to sow clover or other grass seed. I seldom fail to get good clover after oats, and I am pretty sure to get good herds grass and red top after clover, unless it is some dry, sandy plain. Clover fails after being mowed one season.

Chicopee, Mass. M. S. K.

[For the Country Gentleman and Cultivator.]

DISINTEGRATION OF SOIL.

No discovery has been so important in its results since the invention of the plow, as that of underdraining in the preparation of the soil. And the requirements of the soil in respect to its drainage, should be inquired into even before the plow is ready for action. The first of all duties in the preparation of land, seems to be that of ridding it of superfluous moisture, so that no standing water may remain about the roots of plants, keeping them continually cold and wet, but that they may stand in dry ground, and a warmer temperature be made to pervade the soil as far as the roots of plants usually go.

Open drains of very ordinary character, show clearly the value and necessity of such a change when the ground is not naturally dry. As soon as this is accomplished, wherever it is necessary, the soil is to be broken for culture; and the deeper the better—not that the lowest soil, to the depth of three feet or more, should be turned upside down above the surface soil, but loosened; mixed it may be, with sand or gravel, if too clayey and hard.

The experience of every day in gardening, makes it as plain as the nose on a man's face that plants delight in and are benefited by growing in a loosened subsoil, where all their energies are not at task to enable them to push their slender roots through the hard clay. It is a marvel that they are able to make any growth in such soil, and we wonder that they live at all, since naturally grown plants are of little value when compared with their improved condition under cultivation; and it was not designed that plants should perfect their character and the amount of their productions without cultivation, but that they should develop their perfections under the intelligence and ingenuity of man. When growing in a hard subsoil, (though the effect is not so apparent upon forest trees of large size,) little nourishment can reach the lower fibers from the surface of the soil, and they must be compelled to feed almost entirely by means of their upper fibers and rootlets.

By thoroughly loosening the subsoil and trenching it deeply, when united with thorough draining, the manure at the surface has gradual access to the spongioles of the lower roots of the plant; and the roots, on account of the openness of the subsoil, are not forced to retard the expansion of the plant above the surface, but increase in equal proportion; moreover the air has access to the subsoil, and permeates it more or less, changing the character of offensive matter, and neutralizing acids injurious to the growth of the plant. Too thorough trenching is hardly possible. Successful nurserymen and fruitgrowers, who make large trees, in a few years, out of small ones, and even from seed, (as is oftener the case,) and cover them with fruit, or load them with rich foliage, are careful to attend to trenching and drainage. They will show you trees of five years growth, exactly twice the size under this management as under the common mode of letting them take care of themselves and do their own subsoiling; and will tell you the latter mode of procedure, is like casting a child of early age upon the world to attend to its own support and education.

Trenching in gardening, and subsoiling in field culture, combined with underdraining, is a sure protection from the effects of drouth. G. P. S.

Draining—Its Importance and Results.

The following is one of the numerous letters written by our correspondent, John Johnston, in answer to the many private inquiries addressed to him. We copy it from the Chester Co. (Pa.) Times, to which paper it was communicated by the gentleman to whom it was addressed:

C. F. Taylor, Esq.—In answer to your questions respecting the increase of crops by draining, you must be aware that it will depend wholly upon how wet the land is before draining. For instance, I purchased ten acres from a neighbor of mine some fifteen years ago, in order to get an outlet for a number of my drains. That land would not produce any kind of grain,—at least, not half enough to pay the cost of tillage. My first crop, which was corn, was a very large one, and the proceeds therefrom were sufficient to pay the expenses of draining, as well as the cost of the land. On a field of twenty acres, which I have owned for nearly thirty-nine years, I could neither raise corn or winter wheat before draining; but my first crop of corn after draining, yielded over eighty-three bushels of shelled corn to the acre, and that is a very great crop for this part of the country. In fact, I don't think it was ever equalled for the same number of acres together, in Western New-York. This field has been drained about twenty years, and last harvest I got a plump thirty-five bushels of wheat per acre, which was sown on barley stubble, once plowed.

My neighbor, from whom I bought the ten acres above referred to, was greatly opposed to draining at the time; but when he saw the corn and wheat I raised on the land after thorough drainage, he commenced draining his own land, with equally good success. Almost every farmer in this neighborhood has done more or less tile-draining. We have a great many tile-works now,—I believe eight within about six and a half miles of where I write. Some of the machines are worked by steam-power, some by horse-power, others by hand,—and yet a great many more tiles would be used, if they were made. Some farmers are draining with stones, where they cannot get tiles; but the latter are by far the cheapest, because the ditch for stone-drains has to be a great deal wider, and costs about double of those for tiles; then, the laying of the stones costs half as much as tiles cost here.

I am not one of those who believe that all land requires draining; still, much more requires it than any man can suppose who never drained any. A good way to prove whether land needs draining or not, is to dig a hole or holes, say two and a half to three feet deep; and if, at the end of eight or ten hours, water stands in them, your land needs draining, and will pay for it. In protracted drouths, however, the water may be dried out of land which at other times would be too wet for tillage.

Believing that thorough drainage is the foundation of all good husbandry, and that the farmers of this country are but half awake, as yet, to the importance of it, I am glad to see the increased interest manifested in the subject, in different parts of the country. Twenty-one years ago, I was the only man using tiles on this continent, and there was but one person manufacturing them; now, the demand for tiles wherever a machine has been erected, cannot be met. John Johnston

[For the Country Gentleman and Cultivator.]

PEARS ON QUINCE STOCKS.

Sawbridgeworth, England, May 16, 1860.

Some months since I remember seeing in the columns of your excellent and interesting journal, an inquiry whether my plantation of Louise Bonne pears on quince stocks, was still in being. I have much pleasure in saying that my trees, now twelve years old, are perfect pictures of fertility, being at this moment, (May 16th,) just on the eve of setting a most abundant crop of fruit, as we have not had any late spring frosts to injure their blossoms. My plantation of this sort numbers just 2,000 trees. They stand five feet apart in the rows, and 24 feet apart row from row, standing north-east and south-west. The spaces between the rows are occupied with young fruit trees, mostly trained trees for espaliers and walls, and as these are highly manured, the pear trees partake of the benefits of such cultivation, and I may add interfere but little with the usual nursery operations in educating espaliers and pyramids. You must understand by educating I mean the pruning, training, and biennial removal of such, for in this country, trees full of blossom buds, and roots a perfect mass of fibres, so as to bear the first season after removal, are much desired and well paid for. This I call education, which is carried on four, six or eight years before the trees are sold.

When I planted my Louise Bonne pears five feet apart tree from tree in the rows, I calculated on removing every alternate tree at the end of five or six years; but to my agreeable surprise their side branches do not nearly touch, and I begin to think they may remain as they are for several years to come. My pruning is very simple; every year after the fruit is gathered, the shoots of the preceding summer are shortened to about four inches, or from two to four inches, with pruning scissors. The trees that are not very vigorous, the latter length. If they were fancy trees, I should in June pinch in closely the shoots inclined to be vigorous, at the upper part of the tree; but I now tell my simple practice, because it answers well, and can be done by any good laborer.

As usual with beginners, I made some mistakes in planting, for a part of my plantation was made before the ground was trenched, so that after that operation I found my trees too deep in the ground, and too near the clay—these I had raised, and now they are all right. I still hold to the proper medium in planting, and cover the stock *up to the junction with the pear, but not over it.* I will tell you why. Some few trees which were covered over the junction, struck root from the pear immediately, putting forth large roots, which penetrated the clay subsoil to the depth of six feet—*growing vigorously*, but bearing but few fruit. These trees are better looking than those confined to the quince stock; their leaves are greener, and their shoots (much inclined to canker) are stronger, for owing to my soil being highly calcareous, the leaves on the other trees on quince roots are inclined to be yellowish, and the fruit of a bright crimson, of high flavor, and perfectly beautiful. I give these trees, biennially, a surface dressing of soot, in a circle round each tree three feet in diameter; this corrects the tendency to turn yellow, and seems to answer well. In the neighborhood of Paris, thousands of pear trees on the quince may be seen with a yellow tinge on their leaves, owing, as in my case, to the calcareous soil. It is to me very interesting to find all my Louise Bonne pears confined to the quince stock, without a single spot of canker, while those, as I have said above, on the deeply rooting pear, are much cankered, thus showing how necessary it is in cold soils to keep the roots of trees on the surface.

I have been much interested by the excellent practical articles in your columns on pear culture, by "G. P. Norris," "C. Smith," and, above all, by "T."—the latter has indeed left nothing to say.

My idea of planting pears for profit may, however, be worth giving to your readers. A small plantation, well done, is infinitely preferable to covering several acres with trees planted thinly and badly. I will merely say what I should do were I in your country, and about to make a pear plantation for market. I should begin with an acre of good loam, rather inclined to clay than sand. I should mark out my rows from north-east to north-west, so that the mid-day sun would shine between the rows.

I should plant my trees six feet apart, tree from tree in the rows, and eight feet apart row from row; an acre will hold at this distance, about 850 trees. The space between the rows I should keep stirred with the horse-hoe all the summer, and between the trees I should use the hand-hoe. The mode of planting, manuring, &c., &c., is so well given by "T." that scarcely a word is required.

As to choice of sorts, this must be according to climate and experience gained; but Louise Bonne as a market pear is unrivaled. The Bartlett, or Williams', is here almost too fleeting. A pear likely to be very valuable for market, coming after Louise Bonne, is Doyenné du Comice, and Beurré Superfin, although rather a thin bearer when young, will prove of great value, as it bears freely when six or seven years old. The Beurré Hardy is a robust grower—its fruit very large and handsome, and of excellent quality; it is quite worthy of a trial. Another pear likely to be of consequence to your growers, is Beurré Clairgeau; this keeps well through November, and is "very good," and most beautiful. To make it quite safe, it should be double worked on some good growing sort, such as Beurré d'Amalis, or best of all, Prince Albert—this is the most free-growing pear on the quince known, the union with the stock is so perfect.

I shall bud this season, 10,000 of this kind merely for double working, and your nursery-giants (for they are not men,) will soon work 100,000 annually for the same purpose. In short, with, I think I may say, the majority of our *fine* pears, this system of double working is the only way to make their culture *quite* safe.

Yours truly, Thos. Rivers.

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WHITE CLOVER IN PASTURES.

The growth of white clover on soils natural to its production, may be encouraged and promoted by a top-dressing of plaster and ashes. Its chief value is for pasture, as it is of too dwarf a growth to give much of a hay crop, A writer in the Boston Cultivator says "there is an advantage in pasturing white clover which does not strike every farmer. Each joint furnishes a fresh root, (and of course a fresh plant,) whenever such joint comes in close contact with the soil, consequently the more it is trodden the thicker it will spring up. Hence one reason why it grows most luxuriantly near the bars and gateways of our pastures, where cattle often congregate."

Many farmers have observed this last mentioned fact without getting hold of the reason thereof. The natural growth of various grasses, self-sown upon all our soils, is a matter of curious interest to the naturalist and the farmer observant of nature.

[For the Country Gentleman and Cultivator.]

BALLOON FRAMES.

We don't pretend to build any thing else in this prairie country. I have never known one to crush even by the wind; yet I have known them to move from their foundation. (I do not speak of our *tornadoes*, against which neither timber nor walls will stand.) Six years ago I built a good sized two-story dwelling, *balloon*. I boarded it horizontally upon the studing, with good straight-edged rough boards, telling the carpenters that I would find nails if they would drive them. The hint was taken, and plenty of nails were driven. Over these rough boards I covered with flooring, perpendicular and matched. Painted a heavy cream color. It makes a very good appearance *through the trees*, which have considerably grown up since our Senior Editor was here three years ago.

We prefer this wood structure to brick. It is dryer, and a little more air and health.

But the part which I value most for its trifling cost and simplicity, is its foundation. The sills are of plank, 2 by 12 inches, laid upon a 9 inch brick wall. The cellar wall is of stone, 18 inches thick, upon which the joists are laid in the same manner as if I was building a brick house. Then the two-inch sill is laid upon the brick foundation, laping four inches on the ends of the joist, which are cut down at the end two inches, to make the sill level, upon which to lay the floor. Then between the ends of these joists, brick are laid up, with a two-inch space between the outer and inner walls, to keep out the frost, and it does it quite well.

A house thus built into the foundation, will not slide from it nor lift up easily. It is my invention, not patented, and I give it free for those who wish to use it. I like it very much. If I were to build again, I would use coal tar or pitch upon the sill and stud mortices, for I fear it will rot too soon. Suel Foster. *Muscatine, Iowa.*

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LETTER FROM JOHN JOHNSTON.

Near Geneva, June 6, 1860.

Messrs. Tucker & Son—Tell your correspondents who want bones ground, that if they have a plaster mill near, they can have them ground just as they wish. I got a ton ground a month ago, and am experimenting on corn—will also on grass and wheat this fall. I tried bones on wheat some twenty years ago—think they paid, but will be a little more particular this time.

I have also had a ton of limestone ground as fine as plaster, to experiment with on wheat. I have long thought of trying it. Wherever I have seen limestone dressed in a field for building, that field always brought large crops afterwards for many years. I intend to put a ton on half an acre. The ton cost $3 at the mill five miles distant. I have nearly another ton to get home. I will try it on different kinds of soil.

Every thing is growing rapidly—wheat in full ear, or nearly so.

I had the bones ground as fine as corn-meal—put at the rate of 5 cwt. to the acre, on three strips in the corn field—will know by September if any benefit.

Our green peas are nearly ready to cook, earlier than I ever saw before; and, excepting last year and 1845, I have no recollection nor no memorandum of wheat being so forward at this date. If the weather keeps warm, I shall have one field of wheat ready to cut by 5th July.

Tell Mr. Bissell if he gets no run of water in his stiff clay, it is of no use to drain it; it would be folly to lay tile where no water is. For a garden it might be trenched 18 to 24 inches deep; then the water that falls on it would find its way to the tiles; but all stiff clays that no water will circulate through, can never pay for underdraining, unless they are deeply trenched or subsoiled some two feet deep. Still if there is land adjoining, and of a more porous character and laying higher than the clay impervious to water, draining that land and carrying it through the hard clay will prevent the water from coming over the clay, it may ultimately become mellow when not water-soaked from the higher land. *Experiment—dig holes on the higher land and see if water rises. If it does, you can drain.* John Johnston.

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[For the Cultivator and Country Gentleman.]

THE KIRTLAND RASPBERRY.

Messrs. L. Tucker & Son—I noticed an article in your paper a week or two since, in reference to the Kirtland raspberry, from Mr. W. Heaver of Cincinnati, and having had some experience with this raspberry for the past three years, thought a few items might be of interest. I find it a very strong, vigorous grower, a most profuse bearer, and the fruit of good size, and, to my taste, of excellent quality. In color a deep, rich red, and of sufficient firmness to bear carriage well. In flavor, it seems a pleasant mingling of the rich sweetness of the best of the Antwerps, with just enough of the taste of the wild raspberry to redeem it from a suspicion of insipidity. Tastes differ; but the Kirtland is to me pleasanter in flavor than even Brinckle's Orange. But its greatest excellence, in my view, is its *perfect* hardiness. It requires no protection from the severest weather in winter, and last year it endured uninjured our terrible "5th of June frost," which destroyed the fruit of the Lawton blackberry, and every other raspberry on my premises, including the wild native. At the time of the frost above mentioned, raspberries were setting their fruit, and were filled with bloom and half grown berries. The Hudson River Antwerp, Brinckle's Orange, Fastolff, Franconia, Allen, and all others in the same situation and exposure, were entirely destroyed, while the "Kirtland" bore an abundant and beautiful crop.

Geo. W. Campbell.

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[For the Country Gentleman and Cultivator.]

CHEAP DRAINING.

Mr. David Callanan of Callanan's Corners, N. Y., is what I call one of the best farmers in Albany county. He has a farm of about 200 acres, which he commenced tile draining some six or eight years ago. But the great drawback has been the enormous cost of digging drains, as his land is pretty much all strong yellow clay, intermixed with small stones. A three-foot drain, dug by hand, could not be done at a cost less than 30 cents per rod, as a man had to use a pickaxe to break it loose, which makes it a very slow and costly operation.

The other day I took a trip out to his place. I found him hard at work, with half a dozen men engaged in draining. He was using a ditch digger—one of his own invention. It is cheap, simple and durable, and I must say it is far the best ditching machine I ever saw in operation. It is so arranged that he can cut a drain any width and depth required. It is capable of cutting a drain from two to eighteen inches in width, and from two to six feet deep. It makes a drain far superior to anything I ever saw dug by hand. It requires two teams of horses or oxen, and three men, or one man and two boys to use it. Mr. Callanan informed me that he was getting his drains cut three feet deep for about 7½ cents per rod. A ditch the same depth, made by hand, had cost him 30 cents, and sometimes more, which makes a difference of about 22½ cents per rod, which will more than pay the cost of tile and freight.

Any one who has land of a similar character, ought not to hesitate a moment before getting one, as I am certain they cannot do otherwise than give satisfaction to all who may try them. I myself being a tile-maker, feel somewhat interested in draining, and advise all who wish to save their money to procure one of Mr. C.'s ditchers.

George Jackson,
Supt. of New-York State Tile Works, Albany, N. Y.

[For the Country Gentleman and Cultivator.]

COARSE vs. FINE WOOL SHEEP.

Messrs. Editors—In your issue of April 5th, I find a statement in relation to the profits of fine and coarse wooled sheep. Your correspondent says that his neighbor's long-wooled sheep sheared three pounds of wool apiece, and that his Spanish Merinos sheared four and a quarter pounds apiece. He says the long-wooled lambs were sold for $2 per head, and estimates his fine-wools also worth $2. He makes his 42 sheep produce $124.97, and his neighbor's (who I extremely pity) 20 sheep, but $54.80, and strikes a balance in favor of his fine-wools of the pretty sum of $40, and considers it quite an item, and so do I, unless we long-wooled men can do better than that.

Now as we are all looking after the dollars and cents, and as I am a little interested in long-wools, I propose to try my figures along side of Mr. Davis'.

I have sheared this year from my sheep at home, 22 in number, 152 lbs. clean washed and perfectly dry wool. Of the 22, 12 were breeding ewes from which I had 10 lambs—five were wethers and five yearling ewes. The five wethers sheared 41¾ lbs.—twelve ewes, 71 lbs.—five lambs, 41½ lbs., making the 152 lbs., which is within two pounds of seven pounds apiece. Last year my wool brought me 32 cents per pound, which is probably about what it will bring this year, which will make 152 lbs., 32 cents per pound, $48.64—about $2.21 per head for the wool. Now in relation to the value of lambs, he sets down his fine-wool at $2, which is probably about right. I have not lately sold any lambs to the butcher, but have disposed of most of them for breeding, and if any males were left over I made wethers of them, and before they were two years old made them weigh from 200 to 230 lbs., when they could be sold to the butcher for from $16 to $20 per head, which I consider better than to sell them when lambs. I had a ewe this year that weighed, before she was two years old, 227 lbs. When I first commenced breeding sheep I used to sell some lambs to the butcher, but had no trouble to get from $3.50 to $5 per head for them, and could get that now; but I can do better with them.

And now for the test, and to do this honorably and fairly I propose to put the ewes and lambs in competition, and call their wool as my friend has done, an average of the flock, although Mr. Davis has the advantage in having but two lambs less on 27 ewes, when I have two less on 12.

Mr. Davis' 27 ewes, 4¼ lbs. wool per head, 42 cts. per lb., ...	$48.20
Do. 25 lambs, $2 per head, ...	50.00
Average wool and lambs, $3.64 per head.	$98.20
My 12 ewes, 7 lbs. wool per head, 84 lbs., 32 cts. per pound, ...	$26.88
10 lambs, $4 per head, ...	40.00
	$66.88
Average wool and lambs, ...	$5.57
	3.64
Balance in favor of Long-Wools, per head, ...	$1.93

Difference on 42 sheep, in favor of Long-Wools, would be $81.06.

Bethlehem, N. Y. Jurian Winne.

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[For the Country Gentleman and Cultivator.]

EARLY MAY WHEAT.

Fernleaf, Mason Co., Ky., June 14, 1860.

Eds. Co. Gent.—"Early May Wheat" is now being cut. This variety has not varied two days in ripening in the last five years—never since its introduction from Tennessee. It has escaped all disease as usual, and samples No. 1 in quality, yet the yield is *very light* from winter killing of the plants. Many fields will not yield over ten bushels, and none over fifteen, so far as my observation extends. No rust nor joint worm, from which all other varieties are now suffering in the same vicinity. A friend in Hunterdon Co., N. J., writes me that his crop, from seed procured in Kentucky, winter killed in *spots*, but where it stood is very heavy, and longer in the straw than in this latitude, and will not, from present prospects ripen any in advance of Mediterranean sown on the same farm, and I see John Johnston says the same, as to *early ripening*, in New-York, in the Co. Gent. of June 7th. Mediterranean wheat is southern wheat, as well as "Early May," and when first brought here ripened June 15th, as the May now does; but it has grown 10 or 15 days later of late years, and is now subject to rust, from which it was at one time exempt.

Mediterranean wheat was first introduced in 1819, by Mr. John Gordon of Wilmington, Delaware, and was shipped from *Genoa*, and was then the very earliest ripening variety known, and I believe yet is in the northern states. Of late years, and after it was adopted as a standard variety, other importations have been made, and I have no doubt but John Johnston and my Hunterdon Co. friend, have wheat from the later importations. It all goes to sustain my position before your readers for two years past, that for early maturity in wheat the grower must go *south* and not *north*, for seed—and that the change must be made every few years. Here the Mediterranean has lost its early maturing character, for the reason that it has not been renewed since 1819. An importation from Genoa would restore its original character here on this soil. Fresh importations I know have been made into New-York by the Messrs. Allens, and I see it advertised every year at Baltimore, newly imported. I hope your readers in New-York, Ohio and Pennsylvania, who ordered Early May, will report through your paper, their successes and failures, as soon after harvest as convenient. Anthony Killgore.

P. S.—I enclose samples of new wheat of the "Early May" variety. It is a very *short crop*, but better than any other variety, and imperfectly filled, yet the berry is of its usual good quality. It is a characteristic of Early May, that however the crop may *succeed or fail*, it always furnishes a *good sample*, and is No. 1 in quality, whether it produces a paying crop or otherwise. The wheat crop from the Ohio River valley to Texas, including the whole south, may safely be set down *as a failure*. After our next crop is sown, and our own people fully fed, nothing will be left for export. A. K.

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[For the Country Gentleman and Cultivator.]

Growing Currants for Wine Making.

Messrs. Luther Tucker & Son—In your number of 29th March, P. G. asks what variety of currants are the best to make wine—how many to be planted on an acre, &c., and if it is profitable? I should have answered then, but want of time prevented me. Having now more leisure, and perceiving that no one has answered it as yet, I will give him the required information.

The red currant is the best to make wine from. One acre can be planted with from 1,214 to 2,730 currant bushes. This will produce yearly from 130 to 300 or 350 bushels of fruit, which, with water and the necessary quantity of sugar to induce fermentation, will make from 1,600 to 3,000 gallons of wine to the acre, worth from $1 to $1.50, and even more, per gallon. Thus each acre can be made to produce from $1,600 to $3,000 or $4,500, deducting the cost of sugar, casks, cultivation, mashing, refining, &c. This wine is of excellent quality—in all respects much like the wine from grapes; it sells readily, and much is exported to the West Indies and South America.

The cost of a plantation would not be very great, as any quantity of bearing currant bushes can be got at low rates, and the preparation of the land is not so expensive, and need not be so thorough as for a grapevine plantation; besides that, the plants can be made to produce the first year, which is not the case with the grapevine. Currant wine, when well made, is as good a wine as that made from the grape, but as the currant is deficient in saccharine matter, sugar is to be added to promote fermentation, which is indispensable to the formation of wine.

P. G., or any other, can further consult me for more particulars by writing me. F. A. Nauts. *New-York.*

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Planting Furit Trees.—It is said that $800 worth of young fruit trees were planted in the town of Bennington, Vt., the last spring.

THE CULTIVATOR.

ALBANY, N. Y., JULY, 1860.

☞ Messrs. C. M. Saxton, Barker & Co., New-York, have issued a little book entitled "Outlines of the First Course of Yale Agricultural Lectures," consisting of the reports communicated at that time to one of the New-York dailies by Mr. Henry S. Olcott. Conveying as the fullest of them do, only a simple outline of the general course of argument and fact presented, while even this was not at the time in all cases possible,—the value of the work is rather suggestive than practical; but as it has been revised with care by the reporter himself, and submitted for correction to the lecturers, one may consult it with entire confidence in its general fairness and accuracy. The already wide circulation which some of the reports have obtained by being copied from one newspaper to another, shows a public interest in the topics discussed, sufficient to lead to the conclusion that the present publication will exactly supply what the public most desire, a brief and condensed epitome embodying a considerable share of what was there actually said and done. There are some parts of the book, which we have already marked for extract.

In conclusion, Prof. Johnson suggests to the consideration of those who heard the lectures, and others, a scheme of simple experiments upon the use of Salt as a Fertilizer. It was thought that if similar experiments could be set on foot in different hands, scattered widely over the country, the result arrived at could not but possess considerable weight for study and comparison. The subject chosen, while it is one of general interest on which variant and conflicting opinions are held, is also one easily tried wherever salt can be cheaply procured. While we must refer to the book itself for Prof. Johnson's excellent prefatory observations, we copy here the four kinds of experiments which are to be carried on—hoping thereby to call greater attention to the subject, and taking the opportunity to say in addition that we shall be pleased to make our columns the medium of publishing the results of any trials which our readers may undertake. We fear, however, that to many the suggestion will come too late for action the present season.

SCHEME OF EXPERIMENTS.

A. General Effects of Salt—as increase of product, improvement of quality of crop, prevention of disease, &c.

Two plots of any soil in any crop—both may receive other manures or not; but their treatment should differ only in this fact, that one is salted, the other not. Use the salt at the rate of 350 lbs. per acre.

B. Effect on particular crops, or classes of crops, as potatoes compared with carrots, grasses vs. root-crops, root-crops vs. grain.

Two plots for each crop, as under A.

C. Effects of different doses:

Soil and crop alike—one plot unsalted, one with 75 lbs., one with 150 lbs., one with 300 lbs., one with 450 lbs., or other different quantities, less or more in number, as convenient.

D. Effects on different soils:

Soils different—tillage, manure and crop the same. Dose of salt the same. Of each soil a salted and unsalted plot should be observed.

☞ One may—by devoting a spare half hour or two to that interesting compilation of figures annually issued from the U. S. Treasury department under the title of "Commerce and Navigation,"—chance upon some items worthy of note. For example, this report for the fiscal year ending June 30, '59, shows that the Tea bill of this country for a twelve month was nearly *seven millions and a half of dollars*, for not quite 29 million pounds; but coffee is still more a national beverage, for we paid away over 25 millions dollars for 264 millions pounds of this simple little berry. To sweeten these drinks, and for other uses, we bought over 30 millions dollars' worth of sugar, beside expending five millions dollars more for molasses. We cannot grow good enough tobacco it seems, to supply our smokers, and so they pay away four millions and a half for the item of cigars, some fifty odd thousand for other manufactures of the "weed," and over a million and a half more for it in the raw state.

But the primary object of our reference to this table of imports, was to answer a query as to the amount we are paying for willow and willow ware of other peoples' growing and making—the inquirer having seen a much exaggerated statement on the subject, which, notwithstanding corrections already made, every little while takes a new start in the papers. We find that during the year in question

The total value of Manufactures of Willow, was..........	$125,677.00
do. do. unmanufactured Willow,................	38,359.00
Total Willow Imports,..................................	$164,036.00

The aggregate of these items shown in the report for 1855, was $178,117, so that there appears during the intervening four years to have been a small decrease.

The value of our willow imports is not so great as that of the Honey we buy from Cuba, ($181,755,) while we also purchase some $15,000 worth of the latter from other sources. The larger part of our Willow, it may be added, comes from Bremen, (about $93,000;) and from the Atlantic ports of France, (about $45,000;) next stands Belgium with $14,500, and the remainder in small amounts from other scattered sources.

Change of Seed.—The Irish Farmer's Gazette says that "barley seed requires to be frequently changed; and if this is neglected, the result will be a deterioration in the quality, which, of course, lessens the value. The amount of produce from unchanged seed is always less than from changed seed, if the latter has been properly selected." In an article on the culture of Flax, the editor of the Irish Agricultural Review, says that a change of seed has proved "decidedly beneficial." A correspondent of the Country Gentleman recently stated that he had found a change of oats so important, that he now imports his seed triennially from Prince Edward's Island.

☞ A Report of the Fourth Annual Fair of the St. Louis Ag. and Mech. Association, has just been published—prepared by Dr. Hopewell, to whom we are indebted for copies. It is a neatly bound volume of 228 pp., mostly devoted to a minute account of the exhibition referred to, the Reports presented, awards made, &c. We note, beside, an essay on the Culture of the Grape, to which the Association awarded a prize; portions of the late address of the Hon. A. B. Dickinson, so far as we have yet published them in the Country Gentleman, copied from this paper, and the excellent descriptive chapter on Apples contained in "Rural Affairs," to which volume credit for the same is courteously given.

New Mode of Draining.—Mr. S. A. Clemens of Chicago, Ill., writes to the editors of the Country Gentleman, that he "has an improvement on the mole plow, by which hydraulic cement mortar is forced down, and lines the inside of the subterranean tube made by the mole, simultaneously with its passage through the ground—in effect laying a continuous pipe of imperishable material to any suitable depth, and of any desired size or thickness with provision in operating the machine for making the underdrain of as true a grade of inclination as a railway can be laid—water having access to the drain through a fissure or perforations in the bottom." Where stones or roots are not too large or frequent, Mr. C. says he can put in the two inch pipe for 25 to 30 cents a rod.

☞ The Thirteenth Volume of Coates' Short Horn Herd Book, lately issued at London, contains the pedigrees of 1,730 bulls. Mr. Thorne's "Grand Turk" and Mr. Sheldon's "Grand Duke of Oxford," are among the bulls illustrated. Grand Duke of Oxford was bred by Capt. Gunter; got by 2d Grand Duke; dam, Oxford 11th, by 4th Duke of York, &c.

☞ At a late special meeting of the Franklin County, Mass., Agricultural Society, it was voted to purchase grounds at a cost of $5,000. It was also voted to dispense with the show of neat cattle this year, on account of the fatal disease, and the matter of exhibiting other stock was left with the trustees.

☞ The managers of the Montgomery Co., Pa., Ag. Society are moving to establish a Library at Norristown, for the use of its members.

Horse Sales.—At the sale at Clappville, Mass., the 6th inst., of Horses belonging to R. S. **Denny**, Esq., twenty animals brought an aggregate of $15,267—an average of $793 each. The highest prices appear to have been paid by E. D. Bush of Shoreham, Vt., viz., $3,450 for "Pocahontas" noted as a pacing mare, and $2,400 for an entire colt, "Miles Standish," four years old by Black Hawk out of Mary Taylor. "Ninon," a yearling filly from Pocahontas by Ethan Allen, brought $2,300, "John Alden," own brother to Miles Standish, one year younger, went for $1050, and "Garibaldi," two years old by Ethan Allen, also out of Mary Taylor, brought $1,000.

— Two Black Hawk mares were shipped from Boston for Liverpool the 7th inst., "purchased," says the Boston Cultivator, "for Rt. Hon. Lord Berwick by Sanford Howard. The mares are Fanny Fern (bay) and Black Hawk Belle (chestnut,) the former bred by Hon. Francis Wilson, of Hinesburgh, Vt., the latter by Mr. Titus, of Vernon, Vt., and lately owned by Mr. Warder, of Brattleboro.' They are regarded by good judges as remarkably fine animals, and should they reach their destination in safety, will do credit to the country as specimens of our roadsters."

— In connection with the foregoing, we may quote the statement apparently made "by authority" in the Spirit of the Times, that "Mr. Joseph Hall of Rochester, the owner of the famous stallion George M. Patchen, has recently refused $25,000 for him. He considers him worth $35,000." Since his recent exploits on the Union Course this horse appears to hold the "belt," as the champion of trotters the world over.

☞ Among the Devons disposed of at Mr. **Wainwright**'s sale, last week, at which, unexpectedly, we were prevented from being present,—we notice that "Helena 13th" was bought by Hon. **Wm. Kelly**, for Mr. **McCutcheon** of Louisiana, for $200—also "Zerlina" and the bull "Wisconsin," for the same gentleman, at $160 each, and "Helena 18th," for $110, for E. R. **Brown** of Mississippi. E. **Cornell** of Ithaca, bought "Helena 16th" for $135.

☞ We are indebted to the publishers, C. M. Saxton, Barker & Co., New-York, for a copy of "The Young Farmer's Manual," by S. **Edwards Todd**, a full notice of which we are obliged to defer in the present pressure upon our columns.

☞ An advertisement of Callanan's Draining Plow, which we noticed editorially some weeks since, and to which a correspondent refers in another column, will be found elsewhere. Mr. C. states that he has added farther improvements since we witnessed its operation.

☞ Our friends of the Queens County Agricultural Society are making spirited preparations for their Show to be held at Jamaica, Sept. 19. President—Hon. E. A. **Lawrence**; Secretary, **John Harold**, Hempstead.

☞ We have received the proceedings of the Executive Committee of the St. Lawrence County Ag. Society, at a meeting the 5th instant, to perfect arrangements for their Show, which takes place at Canton, Sept. 26–28. President, Hon. C. T. **Hulburd**; Secretary, L. E. B. **Winslow**. The Address is to be delivered by **Luther** H. **Tucker** of Albany.

☞ The Racine Co., Wis., Ag. Society have issued a neat Schedule of Premiums for their exhibition at Union Grove Sept. 11–13—President, Dr. **Cary**, lately deceased; Secretary, G. Goodrich.

The St. Louis Ag. and Mech. Association are to open their next Fair on the last Monday of Sept. The leading premium is a sweepstake prize of $1,500 for the best roadster stallion to harness. Three premiums of $600 for the best thorough-bred bull, thorough-bred stallion and roadster stallion to harness; $300 for the second best, and $100 for the third best of each description of animals offered. All the other prizes are in keeping with the former fame of the association, and cover almost everything connected with the agricultural and mechanical world, embracing the fine arts, the floral kingdom, &c. The premium list amounts to upward of $24,000.

Rensselaer County Ag. Society.—This Society, by virtue of an act passed at the last session of the Legislature, have sold their show grounds at Lansingburgh, the buildings on which, it will be remembered, were burnt a year or two since, and have purchased new and more centrally located grounds, on which they are about to erect three buildings 45 by 100 feet, with a central part, 21 feet by 100, two stories high. Their Fair for this year, is to open on the 19th of Sept., and to continue for ten days.

☞ The Annual Exhibition of the New-Hampshire State Agricultural Society, is to be held in Manchester on the 2d, 3d and 4th of October.

Machine for Sowing Lime.—In Co. **Gent.**, May 24, D. M. N. inquires about a machine for sowing lime. S. Hubbel, Unadilla, Otsego Co., N. Y., has invented a machine for sowing lime, plaster, ashes, and all kinds of grain, of any quantity desirable per acre, which I think would not fail to suit—price about $40. H. P. **Norton.**

Farm Gate.—I send thanks to Dr. Robinson for the use of his drawings and models of a farm gate in your **Annual Register** for 1860. I believe it the best for the cost, in use. That Doctor must be a philanthropist, or he would have made a great spread, and gone to Washington three or four times for a patent, for truly it is much more worthy than three-fourths, or I might say nine-tenths of those *mighty creations* of the brain that get patented. L. R.

Cultivating Corn.—Now about plowing corn and surface cultivating. It is time that important subject was up again. Last season, while hoeing with our man Jake, I told him that some advocated a surface culture. He showed much surprise, and said—"Why, you must plow—must cut down and break the roots, or you will get no corn." I asked him for his reason—he said he did not know, but 'father said so.' Can it not be in a measure with corn as with some other plants, that when a root is cut off, two or three will start from it, and in the end add double to the nourishment? L. R.

☞ The Fourth National Exhibition of imported blood and American breeds of horses, will be held on Hampden Park, Agricultural Fair Grounds, in Springfield, Mass., the 4th, 5th, 6th and 7th of September. The existence of the Pleuro in cattle having led to the abandonment of the State Agricultural Fair, the Directors of the Hampden County Society promptly resolved to substitute a Fourth National Horse Show, and have appointed a Board of Managers, most of whom have served in the same capacity at the former successful Exhibitions. The list of premiums has been enlarged and classified, and it is designed, aside from the exhibition in itself considered, to give greater facilities for the deliberate examination and trial of *horses intended for sale.* Springfield is easily and quickly accessible from all directions, and Hampden Park is unequalled in its track for showing or training a horse.

Plaster for Potatoes.—Four years ago we planted part of a field with potatoes—first quarter acre, to which we applied a moderate dressing of gypsum—then a quarter acre without it, and then again a larger area with it. The effect was very apparent on the potato crop, in favor of that part to which the gypsum was applied; and the clover, which is now on the ground, shows to the foot what was plastered and what was not. That which was plastered, presents a dark green appearance, and a much heavier growth than the other, which is also much paler in color. D. M. **Nesbit.** *Union Co., Pa.*

☞ **Asa U. Sutton**, of Tecumseh, Mich., informed me not long since, by letter, that he raissed in two years planting one hundred and thirty five bushels, good measure, of Prince Albert potatoes, from one that I gave him. If any one has exceeded this we would like to hear from him.
Clinton Corners, N. Y. A. M. U.

Cashmere Goats.—The company who are breeding these goats in Tennessee, the papers state have recently sold six of them at $1,000 each—one to Mr. Fry of Louisiana—a pair to Dr. Cornet of Logan Co., Ky.—a pair to W. E. Douglass of Texas, and one to Mr. Davis of Mecklenberg Co.

Chinese Sugar Cane.—The Cincinnatus, for last month, states that R. Peters, of Atlanta, Ga., (who is one of the persons that first cultivated the *sorghum* plant in this country, and who went into the business on a large scale for several years, under the sanguine expectations of ultimate success,) has at last given up its cultivation. He is satisfied that, for cattle feed, its stalks are not superior to Indian corn, while its seed is injurious. As a producer of sirup, it will not compete with the common sugar cane in the South; but where fuel is plenty, in some of the northern States, it may be cultivated with economy for this purpose.

Depth of Planting Corn.—A correspondent of the Country Gentleman, writes to this paper under date of Bloomington, Ill., May 26: "I take your recent advice to correspondents to write whilst the matter is fresh on the mind. I have this week been engaged replanting corn, and am persuaded that the proper depth for planting corn is to be determined by the mellowness and richness of the ground, allowing for the dry or wet state of the weather; for poor hard soil, dry one inch; wet, two inches; on rich loose soil, dry two inches, on wet, three inches."

Hay Required for Cows.—Otis Brigham of Westborough, Mass., after 70 years' experience in farming, says in the N. E. Farmer, that good cows will eat on an average 20 lbs. of hay per day, when giving milk, and 15 lbs. when dry—not by guess work, but tested by actual weighing for months at a time. They will pay well for their keeping, by an average of 6 qts. of milk per day through the year. He estimates summer pasture at 50 cents a week, and milk at 3½ cents a quart.

Col. Pratt's Butter Dairy.—The yield per cow at this dairy, for the year 1859, as furnished for the Journal of the State Ag. Society, is 164 pounds. The profit of this department of the farm is stated at $938; the labor and interest on capital invested $1,550.

Scratches in Horses.—A correspondent of the N. E. Farmer, says that what is called "bright varnish," sold at paint shops, is a sure cure for scratches, and that he has used it for cuts on human flesh with remarkable success.

Seeding with Oats.—You state that "seeding down with oats is rarely successful." We in these parts seed most of our oat ground down with grass, (clover and timothy,) and it does very well, with but few exceptions.

J. T. H.

☞ It is stated in the papers that P. G. Gardiner of Schoharie Co., N. Y., owns a half and half Durham and Hereford, now about 2¼ years old, which weighed 1,770 pounds when 28 months old.

Mixed Stock in Pasture.—In a letter to the Ohio Farmer, John Johnston gives his views on this subject—one upon which considerable remark has been had in agricultural journals. He says: "I have found sheep to do very well among cattle, but cattle do badly among sheep. Cattle do well where horses pasture, but horses will not eat what cattle leave very readily. Horses and sheep do well together, especially the sheep."

Wire-Worms Trapped.—The Ohio Cultivator tells of a farmer, who spread a quantity of short straw from the threshing machine on land badly infested with wire-worms, and plowed it in. It was planted to potatoes, and on digging them in the fall, they were found uninjured by the worms, which were found to have crawled into the straw, one more in each piece until stopped by the joint, where they perished—"not having sense enough to back out, he had them by the million, and was never afterward troubled with them on the field."

☞ The Journal of the N. Y. State Ag. Society announces that the Hon. Josiah Quincy, Jr., of Boston, has accepted an invitation from President Huntington to deliver the Annual Address at the coming Elmira Fair.

☞ The "Susquehannah and Chemung Valley Horticultural Society" has issued the prize list of a Summer Exhibition, to take place at Havana, Schuyler Co., June 20 and 21—President, Col. E. C. Frost; Secretary, E. P. Brooks, Elmira.

UNLOADING HAY.

Eds. Co. Gent.—In your issue of the 17th May, I see an article on unloading hay by L. F. Scott. In a ramble at New-Lebanon, Col. Co., N. Y., among the Society of Shakers, I came across one of the best methods of unloading, in use by them, I ever yet have seen.

Directly over the mow, is attached to the rafters a tackle block; and on the barn floor a similar one, a rope of ample dimensions passing through these two, and on one end is fastened what they term gang hooks. The two hooks being connected by a few links with a swivel, when stretched apart will measure some five feet. Set them in the load with tines inclining inwards, and consequently the harder the draft the better they hold. I have seen a yoke of oxen draw to the top of the barn, a load at *three* hook fulls. The upper blocks being over the middle of the mow or bay, enables a man to swing it at any place he may choose. This is the cheapest and most expeditious method in use, of ganging hay. G. H. Gregg.

A FLY-PROOF WHEAT.

Zanesville, Ohio, June 16, 1860.

I send you herein two heads of a fly-proof wheat, lately introduced into this county from Hardin county, and called here the "Hardin Co. Wheat." Perhaps you may recognize the wheat, and give its proper name. Several years since, a farmer walking through his wheat-field in Hardin county, to examine whether it was worth cutting, found the midge had taken so nearly all that it was not worth cutting—indeed seemingly all gone. But he observed two heads that looked full, and different from the others. He cut them, and planted the seed in his garden. From this beginning has sprung this variety—so goes the story. You will observe that the wheat is smooth—red chaff, and the caps so closely constructed as not to admit the fly. I examined a number of fields to-day, (in a drive of 14 miles,) of this wheat, and did not find the first head destroyed by fly, while the other varieties, Blue Stem, &c., were much damaged, some badly. I thought the information worth communicating. Isaac Dillon.

P. S.—The prospect for wheat in this county is good, as it is for all crops—grass, corn, potatoes and fruit.

THREE VALUABLE RECEIPTS.

The following are furnished for the Country Gentleman, from a source which authorises that personage to commend them unhesitatingly to the attention of his numerous lady admirers:

Composition Cake.

One pound and a half of sugar.
One pound and a quarter of butter.
One pound and three-quarters of flour.
One cup of milk.
One teaspoonful of soda.
Six eggs.
One wine-glass of brandy.
Fruit to your taste.

Jumbles.

Half a pound of sugar.
Half a pound of butter.
Half a pound of flour.
Flavor with cinnamon.

Chocolate Custard.

A quarter of a pound of spiced chocolate.
One quart of milk.
Two eggs.
One cup of sugar.

Grate the chocolate, and stir into the milk when *nearly* boiling. When it begins to thicken, add the eggs and sugar. Let it boil a few minutes, stirring it constantly. L.

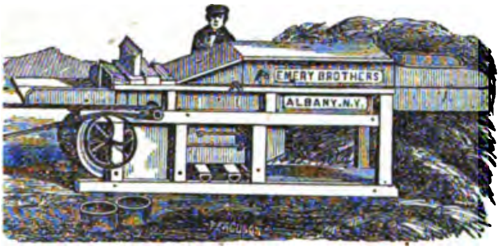
BIRDS INJURIOUS TO BEES.—I have heard it remarked that King-Birds were in the habit of destroying large numbers of honey-bees, in fact almost feeding upon them. Is such the case, and can some bee-keeper inform me? A. W. A.

EMERY'S PATENT
RAIL ROAD HORSE POWER
AND OVERSHOT
Threshing Machine and Cleaner Combined,
MANUFACTURED BY
EMERY BROTHERS,
PROPRIETORS OF THE
ALBANY AGRICULTURAL WORKS,
No. 62 & 64 State Street,
ALBANY, N. Y.

The annexed Horse Power has been before the public for nearly ten years, and met with unexampled success for its general adaptability to every desirable degree of force and motion required for the numerous wants of the Farmer and Mechanic, also for its ease of operation and durability, and has gained a world-wide reputation which is not enjoyed by any other Horse Power extant—all which is a sufficient guarantee of its value, without a detailed description in this notice.

THE THRESHING MACHINE AND CLEANER COMBINED,

As represented in the annexed Cut, cannot claim so long and extended an introduction and general adoption as the horse-power; but its uniform success at every and numerous fairs where exhibited, and an extensive introduction and sale during the past two harvests, has demonstrated its superiority over all its competitors as well as all similar machines heretofore made by the proprietors, and entitles it to the following detailed notice.



This machine combines all the advantages of the common Thresher with the over-shot cylinder, adjustable concave and changeable features, for left or right hand working, so long manufactured by the proprietors. It also has the journals of its cylinder hung in universal boxes or bearings, thereby always avoiding any binding and friction between them.

This machine is furnished with a Fan, placed beneath the feeder's table, which is driven by an outside pulley, over which the main band passes and drives it in its circuit from the Horse-Power to the pulley of the threshing cylinder. A Shoe, with screens and sieves, is also placed partly under and after the cylinder, and is similar to that in a common hand grain fanning-mill, except the sieves and screens, which are all of an improved and peculiar construction.

This frame-work is extended some six to eight feet in length aft the center of the cylinder, and is lined up its sides, and covered over the top. Within this extended and enclosed portion of the frame are placed a light wood riddle, filling the whole area, and with a close wood bottom directly beneath it. Both riddle and bottom receive a vibratory motion endwise, but in contrary directions, so that while the riddle serves to separate the straw from the grain, and carry it off at the extreme end, the tight bottom serves to convey rapidly and steadily the chaff and grain which has fallen from the riddle upon it, back towards the cylinder, and discharging it directly upon the finger-board of the shoe.

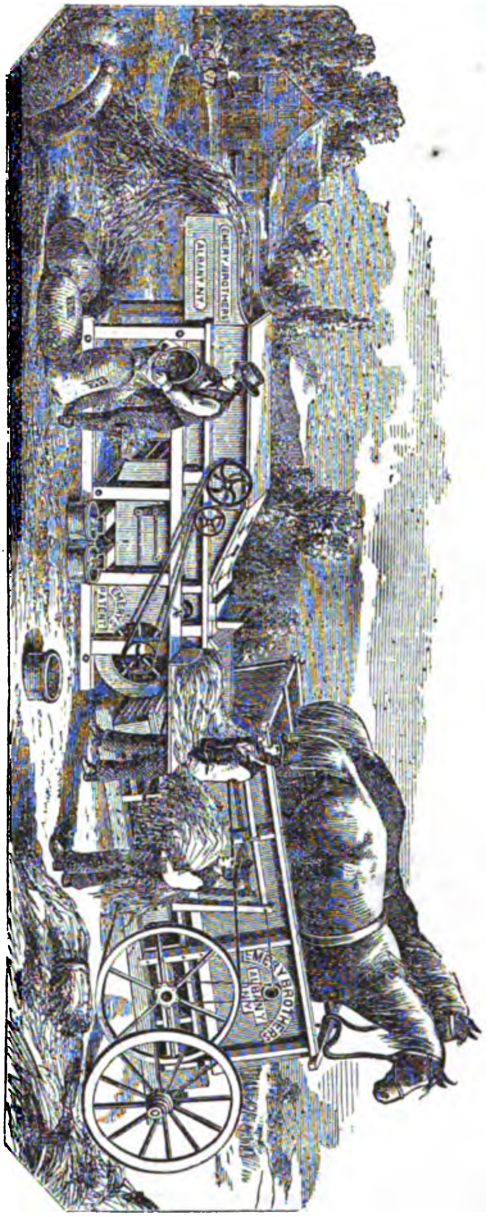
Among the most important improvements introduced by the proprietors in their machine, and which have given it its wide celebrity and its extensive use during the last two harvests, are the following, which need but be known to be appreciated.

First, an endless apron of canvas, with hard wood slats extending crosswise the machine, which are about two inches wide and two inches from centers, and three-eighths of an inch thick, and confined edgewise to the endless apron, and with lugs at the ends, so as to form cells between the slats when moving in a plane, for receiving, holding and conveying the grain, while the straw and coarse chaff are suspended upon their edges and from the grain in the cells. This apron is placed immediately at the discharging side of the cylinder, and at an inclination upwards and nearly parallel with the inclined portion of the top of the machine, as seen in the cut.

It is well known that in all over-shot machines the grain and straw are discharged at different angles, the grain taking a more downward direction, while the straw is carried higher and farther from the machine, and if allowed would strike the floor separately, and form almost a perfect separation in the operation.

This endless apron is so placed in relation to the cylinder, as to avail itself of this described first and almost perfect separation of the grain and straw, making at a low estimate Ninety Per Cent of the entire separation at this point. The apron moving rapidly in the same direction with the grain, the concussion upon its slats is so slight as not to fracture the kernels of the most tender kinds of grain, and causes little or no wear upon the slats from the same cause. At the upper end of this apron, the grain from the cells falls directly upon the inner end of the tight bottom, by which it is conducted with the riddled grain to the shoe as before described, while the straw is caught by a revolving beater with strong iron teeth, which teeth, as it revolves, are projected outward, and comb rapidly forward the straw, tossing and opening it for the free discharge of any grains which may be retained in it. These teeth, on their circuit with the beater, recede within the beater at each revolution during the returning part of its circuit, thereby avoiding the possibility of clogging or winding of the straw upon it.

Another feature is several series of wood fingers, lying within and upon the straw riddle: these fingers are about twenty inches long, and with each vibration of the riddle, are made to rise and fall several inches, thus virtually suspending the straw and agitating it at the same time. These fingers are very light, and move without noise, and require but a moiety of force for their action.



This machine, as shown by its frame work, is found sufficient for threshing and cleaning perfectly all hard grains, but when light grains are to be threshed, and the work to be crowded, there is an extension which is attached if desired, and is shown attached in the cut. When not in use, or being transported, this extension may, with the side-boards and pulleys, which appear above the main frame, be detached and packed within the space inside the main frame, and the top, as seen, allowed to drop down upon the frame itself, thus making a compact and safe machine for transportation, while it is simple of adjustment for any person of ordinary capacity.

The grain as it is thrashed, is discharged by two spouts, one for the cleaned grain, and one for the tailings and partially cleaned grain—and, when ordered, an elevator for returning the tailings back to the riddles, &c., is attached, and for many kinds of grain is found a great labor saving attachment, and requires also but a slight force to keep it in motion.

Price of these Improved Machines, in setts complete,....	$250.00
Price of Horse-Power, Endless Chain or Lever principle,.	120.00
Price of Threshing Machine and Cleaner combined,.. ...	130.00
Price of sett of Bands and Extras,........................	5.00
Price of Elevator for tailings, (always an extra charge,)..	10.00

For further particulars and descriptions, see the recently published Illuminated Catalogue of the Albany Agricultural Works, which is furnished gratis on application and receipt of three cents to prepay postage on same. Local agents solicited where none are now appointed, to whom liberal discounts will be allowed. Address

EMERY BROTHERS,
No. 62 and 64 State St., Albany, N. Y

July 5—w&m1t.

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Occoquan, Prince Wms. Co., Va.
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CLOVER MACHINES, WOOD SAWS, and DOG POWERS.

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Schenectady, N. Y.
May 24—weow6tm2t.

STEEL PLOWS.—We are manufacturing

for the spring trade large numbers of our Mohawk Valley Clipper Plows with steel mold-board and land-side, with steel or cast point, as desired, and would refer you to the following persons, who have them in use:

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Wm. Summer, Pomaria, S. C.
R. C. Ellis, Lyons, N. Y.
Col. A. J. Summer, Long Swamp, Florida.
A. J. Bowman, Utica, N. Y.
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Jan. 26—wtf Mar. 1—mtf.

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May 24—wtfm2t

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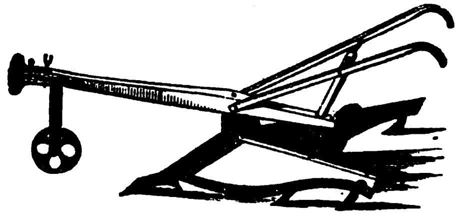

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I continue to manufacture, as heretofore, Manny's celebrated Combined Reaper and Mower; with Wood's Improvement, this machine fully maintains its reputation as the best Combined Reaper and Mower yet introduced, and inferior to none as a Reaper or Mower.

I have added to this machine a Self-Raking attachment of my own invention, the most simple in its structure and mode of operation of anything of the kind ever offered to the public.

Price of two-horse Mower, delivered here on the cars,........... $80
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Do. with Self-Raking Attachment, ... 140

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SOUTH AND OXFORD DOWN SHEEP.

Consisting of a BUCK THREE YEARS OLD, FIFTEEN EWES AND SIXTEEN LAMBS, in excellent condition.

For want of pasturage, the lot entire, if applied for soon, will be sold for Three Hundred Dollars. Address
Box No. 87, Post-Office,
June 21—w4t. Salem, Mass.

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COUNTRY LIFE—A Handbook of Agriculture, Horticulture, and Landscape Gardening. By R. M. Copeland. Beautifully Illustrated. Price, common edition, $2—Fine, $3. For sale by L. TUCKER & SON, Co. Gent. office, Albany.

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BLACK SPANISH EGGS.

NOTICE.—I can receive no more orders for these eggs this season. I shall, however, have for sale in the fall some very fine young fowls for description of which see future advertisement.
June 7—wtf. WM. R. HILLS, Albany, N. Y.

THORLEY'S FEED FOR HORSES AND CATTLE—224 lbs. for $7.50—in cases. The very best in the world. Sold only by W. W. EGGLESTON,
June 7—w8t. 84 State St., Albany, N. Y.

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Caps rendered anti-mildew, and with improved metal eyelets in the corners; also Dinsmore's patent fasteners, for sale by the subscribers.

Prices range from 28 cents to 62 cents, according to size and quality of caps. The articles offered this year are superior to any offered before, and we think are perfectly adapted to the purpose.
CHASES & FAY,
May 31—m1tw8t Boston, Mass.

THE FRENCH RASPBERRY FOR SALE at $5 per 100; $40 per 1000; $150 per 5,000; needs no winter protection, and bears two annual crops of fruit. Isabella Grapevines, one to two years old, $5 per $100; $40 per 1000; two to three years old, $10 per 100; $75 per 1000; three to four years, $15 per 100; $125 per 1000. Exchanges for Pear Stocks, if desired, will be made.

Fruit and Ornamental Trees, Shrubs and Plants in general.
RICHARD M. CONKLIN,
Sept. 29—wtf. Evergreen Nursery, Cold Spring Harbor, L. I.

THE CULTIVATOR.

THIRD] TO IMPROVE THE SOIL AND THE MIND. [SERIES.

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THE CULTIVATOR has been published twenty-six years. A NEW SERIES was commenced in 1853, and the seven volumes for 1853, 4, 5, 6, 7, 8 and 9, can be furnished, bound and post-paid, at $1.00 each.

TERMS—FIFTY CENTS A YEAR.—Ten copies of the CULTIVATOR and Ten of the ANNUAL REGISTER OF RURAL AFFAIRS, with one of each free to the Agent, Five Dollars.

"THE COUNTRY GENTLEMAN," a weekly Agricultural Journal of 16 quarto pages, making two vols. yearly of 416 pages, at $2.00 per year, is issued by the same publishers.

Editorial Notes Abroad.

No. XXXIII—Farming in Lincolnshire.

Not to dwell longer now in Norfolk, although my Notes might bear me out in a chapter or two farther on such a very attractive subject, let me revert for a moment to the Eleventh Letter in this Series, dating from Boston in Lincolnshire, July 25, 1859. Some glimpses were therein given of the practice of one or two Lincolnshire farmers in the northern part of the County, whence, coming down into the more central and eastern district in the vicinity of the city just named, I was obliged to leave a gap in the narrative which it is the purpose of the present writing to fill as well as may be practicable after such an interval of time.

The Fens—A Yeoman Farmer.

The farms I visited near Boston, were several miles to the northwest of that city, just upon the border of the fen country, and the wolds that rise between it and the higher inland district, known as the moors or Lincoln Heath. The drainage of these fens has been made very complete at a great expense. The original condition of the land was most "deplorable," writes Mr. Clarke of Long-Sutton; "being flooded with deep water every winter, in summer covered with thistles and nettles five feet high, and the annual number of rotten sheep was incredible." The area comprised altogether in what are called the East, West and Wildmore Fens, is about 40,000 acres. A capacious "catch-water" drain was first carried around, along the range of wolds, cutting off their outflow and carrying it away into the river Witham or elsewhere, while the whole surface of the almost perfectly flat lowland was cut over with canals to receive the fen-water at a lower level. These canals receive their contents from open drains, along the roads, between the fields, and wherever, in fact, they can be made serviceable in carrying off the surplus water, and are many of them so large that flat boats come up to bring manures from Boston and take away the produce to market. The soil, where I saw it, is mostly of a silty nature, resting upon clay, and is very fertile—kept so by the abundant application of fertilizing material, for English farmers do not depend upon Nature, as many do in our river-bottoms, spontaneously to bring forth grain and herb after their kind, but continually furnish the fields, however rich they may naturally appear, with the additional resources of art.

Mr. W. CHAPMAN, whom I visited at Medlam, near New Bolingbroke, was farming, I think, about two hundred acres, a part of it *his own land*—in this respect, as well as in the close personal attention given by him to his pursuit, reminding me more nearly than any other English farmer I saw, of some of our own best farmers. He was also, I believe the only "yeoman" with whom I spent any time, for this word does not signify in England what we generally take it to mean, the whole "middle class" of agriculturists, but is confined strictly to those who are proprietors as well as cultivators of the soil on which they live. About forty acres were in permanent grass, and the usual stock of the farm was 30 to 35 or 40 "beasts," and about 200 sheep. There were at the time of my visit, however, 220 sheep on the place. The pasturage upon these fens is wonderfully good, although there is a smaller proportion of it, as compared with arable land, in this particular district than in many others. Upon 20 acres Mr. C. was then pasturing 94 sheep, 18 beasts, and a mare and foal—the sheep having been there since "Lady Day," April 5, and the cattle since May. The stock is wholly taken off from the pastures from Oct. 15 or Nov. 1, according to season, for about a month, "to ease the land a little;" then it is re-admitted and the pastures again grazed until March, at the rate of about 2½ sheep per acre. One "beast" is considered as about an equivalent for four ewes or five yearling lambs.

Feeding Sheep and Cattle.

The sheep were sheared in May, yielding an average of 10 pounds of wool per head, of a kind that sold last year for about 12*s.* (say $3) per fleece. Mr. C.'s aim, as a good farmer, was to clip 10 shillings' worth (say $2.50) of wool to every acre of his land. The breed is what is called the Lincolnshire, although, as I have heretofore remarked, a tinge of the Leicester has given more symmetry and earlier flesh-taking capacities to the larger frames of the original "Lincolns." On these fens, however, the Lincoln strain is more in the ascendant than is probably the case on the heath; the character of the climate or pasturage, or both, enables them perhaps to do better justice to a large frame than the upland farmers can, in putting on it a good coating of flesh at an early age. Mr. C. bred most of his own sheep, and considers the lambs to have cost him by the time they are a twelve-month old, about an average of 45*s.*

(say $11.25) per head. They then receive another six months' pasturage, and are marketed about October or during autumn, when they would bring 50*s.*, thus affording 5*s.* profit besides the wool (which was 12*s.*) sheared in the spring, or a total profit of 17*s.* (say $4.25) per head.

For the purpose of breeding, Mr. C. hires a good ram from some careful breeder, to put with his own ewes—sometimes paying £9 or £10 for its services during the season.

The story of cattle feeding was not so fine a one. If a beast is put up the first week in November and fed for 6 months, he sometimes consumes during this time as much as half a ton of oil-cake, at a cost of £5. As a general rule, however, Mr. C. wanted a ton of cake to last three beasts during the feeding season, and sometimes the sale of the animal would net 20 to 30 shillings, above its cost and the cost of the cake it had eaten. But as a general rule with cattle that are bought in, feeding no more than pays for the oil-cake, in money-return; for his interest, his labor, and his fodder, the farmer has to seek returns in the manure that is made. Mr. C. generally raises 8 to 10 calves. In feeding the cattle, he gives oil-cake in morning, followlowed by oat straw for fodder; then bean straw at noon, and wheat straw for night and bedding.

The pigs of this part of Lincolnshire will weigh "30 to 40 or even 50 stone," when killed; the stone is 14 lbs.

Draining, Rotation and Crops.

All or very nearly all of Mr. Chapman's land is drained with two inch pipe tile, no collars used, costing 18*s.*, (say $4.50) per 1,000, drains 33 feet apart, and from 3½ to 5 feet deep. The general depth, however, is three feet and a half, and the cost of draining is from £2 10*s.* to £3 per acre—the soil being a silty mold or clay, easily dug, while on the wolds, where it is often stony or a greater depth necessary, the cost is considerably greater. The price paid for digging is from 1*s.* to 1*s.* 2*d.* per chain of 22 yards, so that the cost per acre for labor alone may be rated at 18 or 20 shillings on the fens, while 3*s.* 6*d.* per chain would perhaps no more than cover the labor of digging on the wolds. The drains here on the fens are made to operate well sometimes *almost on a level;* for instance, in one field there was only a fall of *three inches* for a length of 5 chains, less than one inch to a hundred feet.

The system of farming on the wolds is quite commonly the ordinary Norfolk or four course rotation. But on the fens this is generally varied in one way or another. Mr. C.'s general practice he described to me thus:

1. Wheat with seeds sown about May.
2. Hay crop, feeding the stubble to the lambs, and allowing the land to lie all winter—then in spring, sowing
3. Beans, peas or oats.
4. A Wheat crop, and fallow after harvest—the next year putting in
5. Turnips—followed by wheat again as above.

Or else, in some cases, 3, beans or peas; 4, oats; 5, wheat, and, 6, turnips—making the course another year longer.

The rape crop is one often alternated with turnips in this district—that is, every alternate time that a field comes round for turnips, rape is substituted. Sown about the middle of June, it is ready to begin to feed in October, and may be taken off the ground in time for wheat in November, by putting say 250 sheep on a ten acre lot—which would be just in season to provide for them, while it is desirable to allow a respite to the pastures. An acre of rape, I was told, "won't go as far as an acre of turnips, but it seems to feed the sheep faster."

As to the production of the land now and the improvements effected in the agriculture of the locality of late years, Mr. Chapman informed me that his wheat crop had averaged for seven years right along *forty bushels per acre,* sometimes running up to 48 or even reaching 56. There was a decided change since he could remember; he knew that in old times five quarters (40 bushels) was considered a great crop, but now they "thought nothing" of anything less than six (48 bushels)—a change ascribed to "better management," including particularly more manure and better drainage.

Manuring—Hoeing the Wheat—Labor, &c.

The manure here is principally applied to the turnip crop, and, as far as it will go afterwards, upon the wheat ground, if not already too strong. About 15 tons per acre of good farm-yard dung is the dose he means to employ every other year. The breeding ewes eat the stubbles off as closely as possible, and the manure is carted out—say about the middle of February. On a meadow of six acres and a half, we saw a stack of hay probably weighing 14 or 15 tons.

The following statement will show, nearly, the disposi- of Mr. Chapman's farm last year:

In wheat, ...	50 acres.	In permanent grass,..	40 acres.
In oats, ...	34 "	In peas, ...	12 "

In turnips, cabbages, mangolds and rape, 25 acres.

And the remainder in grass and clover "seeds."

The wheat fields are sometimes hoed in spring, and the seeds sown and harrowed in; sometimes the seeds are drilled crosswise with the drills of wheat, which was thought the better way, and is more in use on the wolds. Clover is cut when well in bloom. It is not customary to salt the hay in curing. It is still more common, I understood, to hoe the wheat on the wolds than on the fen, the cost of the process being about 2*s.* 3*d.* per acre, and, subsequently, at about the time of earing, women and boys go through the field to pull the worst weeds—the cost of this second weeding varying according to the time it occupies.

The labor employed on this farm is generally that of four or five men, up to ten in the busy time, at 2*s.* (say 50 cents) a day; some "confined" men get 10*s.* a week, with house rent and a certain quantity of bacon, or it may be a quarter of wheat—equivalent altogether to 15*s.* or 16*s.* per week. The rent paid here for laborers' cottages is from £4 to £5 per annum. Noticing a cottage just completed, with three bed-rooms up stairs, and an out-house, all of brick, I asked a rough estimate of its cost; it had been built for about £90. Mr. C. was then re-draining a field with pipe, which had been drained with brush about 15 years ago.

The threshing is here done to a great extent by a portable engine going from farm to farm for the purpose. The price paid was 25*s.* per day, (say $6.25,) for an eight-horse power engine and thrasher, with two men and coals found. The grain was thus made ready for marketing, except one dressing; or a machine may be had at a little higher price, perhaps 28*s.* per day, to do the whole operation, including bagging and weighing. Forty to fifty quarters, (320 to 400 bushels,) is considered a fair day's work, taking 8 men and 4 boys to work to advantage, and burning one-third to one-half a ton of coals, at a cost there of 12*s.* to 14*s.* per ton.

I also spent some pleasant hours with Mr. C.'s brother-in-law, Mr. WILLIAM FOWLER, at East Kirkby. Mr. F. was situated more upon the wolds than Mr. Chapman, occupying about 400 acres, and I was much interested in our walk over his farm, and in the information obtained from him in conversation. Indeed I found it very difficult here, as well as in Norfolk, to live up to the arrangements I had been obliged to make previously with respect to the allotment of my time; and there were some points upon which I found that so much could be learnt in Lincolnshire, that in going I only satisfied myself by mentally forming a determination—destined not to be accomplished—to return to the county again before finally setting out for home.

In the system of practice above outlined, there is a considerable similarity with the ways of farming already described in other localities. The same general objects are kept in view, and much the same agencies employed in reaching them. I have ventured to state the facts I collected in each case, however, even at the risk of repetition as to their general tenor; the details every where vary, more or less, and if there are coincidences which may possibly become tedious, they are all of a kind, to impress an American farmer with the importance there universally accorded to careful culture, abundant manuring, thorough underdraining, improved live stock, judicious rotations, and better "management" throughout the whole round of the farmer's duties. It has been justly remarked that the principles that underlie the successful practice of Agriculture are the same everywhere; and it may be added that they are few and simple in themselves, however numerous and intricate may be the modifications they assume in different localities. The application of these principles is universally prominent in farming that is pecuniarily profitable, with only rare and occasional exceptions, and, unless the reader could trace the action of these principles, accompanied by the commentary of their results, more or less distinctly in every step of our progress among the farmers of Great Britain, we should certainly fail in accomplishing the chief end of the journey.

Mr. Chapman kindly brought me into Boston—a pleasant drive, with much that was interesting to see and discuss in the fields and water courses along which it carried us. On reaching this ancient and notable city, the reader may not care to share in our twilight stroll—to go with us to the evening service at Boston chapel, where we may see the memorial to COTTON MATHER, toward which our American Boston lent its fraternal contributions, or to visit the old church of St. Botolph, with its tower, discernible, it is said, by the sailor forty miles away, and the inscriptions that mark the last homes of the Boston fathers who slumber under the shadow of its walls. He might mind it less, indeed, to be invited with us to a seat in the company room at the Peacock Inn, before one of the juiciest chops, of which the savor still haunts a memory fully appreciative of the merits of English mutton—chops calculated, too, to convey a better idea of the Lincolnshire style of sheep, at least when eaten with a Lincolnshire appetite, than several pages of Martin, Spooner or Youatt.

— Suffice it to say, that the next morning I took the train from Boston to Sleaford, westward far enough to bring me among the farmers of Lincoln Heath. Here let me for the present pause.

TWO-HORSE IMPLEMENTS FOR CORN CULTURE.—The Prairie Farmer has a letter on this subject advising farmers to throw aside all their one-horse cultivators, harrows, plows, etc., and procure those which will work two rows at a time, to be drawn by two horses. Some such have already been introduced, and work well on soils rather mellow and free from sods and loose stone. One man can do double work by this means, and take care of twice the number of acres that he can with one-horse implements.

EDITORIAL CORRESPONDENCE.

The Central Park of New-York—Waldberg and the Attendance at Mr. Conger's Sale—Prices and Purchasers—Springside and Mr. Bement's Pets in the Poultry Yard—Thorndale and the Druid's Sketches—The Herd and the Buildings—The Farming and Live Stock of Dutchess County—Pleuro-Pneumonia and the Crops.

THORNEDALE, Friday Evening, June 29.

As the "platform" of the COUNTRY GENTLEMAN is a tolerably wide one, with a "plank" for the City as well as broad space for the practical and the beautiful of the Country, perhaps I may be permitted to open a very miscellaneous and hurried letter with a pleasant drive three days ago, in the new "Central Park" of Manhattan Island.

The idea that the northern side of the New-York City-Hall "would only be seen by persons *living in the suburbs*," has by degrees been abandoned even by the most stubborn of the Knickerbockers of the last generation. The progress of the place in less than ten years, indeed, both in actual growth and in public spirit, is illustrated by the anticipations of a Park foreshadowed from Albany through the medium of the *Horticulturist*, in 1851, as compared with the realization of DOWNING'S arguments now going forward. Mayor Kingsland hazarded the recommendation of a hundred and sixty acres of land; Downing daringly called for five hundred; the city has taken more than eight. Twenty streets higher it has gone to find it, than the location mentioned then; five and a half times the sum estimated then, has been paid for the soil; partially completed as it only is at the present time, the thousands are already making it a place of resort and recreation. The winter exercises of the skating pond are finding a counterpart in the shaded walks and "blossoming gardens" of June; and Downing's "lovely lakes," his "whispering trees" and "broad reaches of pleasure ground," are at last shaping themselves one after another to the view, under the impulse of two or three thousand active laborers.

It was a good fortune that threw me in the way of making my visit at the Central Park in the company of friends whose words of criticism and approval as we passed along bore the weight of practical experience perhaps unequalled, and of extended observation both in this and other countries. If I have not time to touch at all upon "the many beauties and utilities" that must grow out of the undertaking, nor yet to allude at length to the measure of judgment, good or bad, with which its details have thus far been conducted, it would at least be thankless in no way to refer to the general merits of the plan, the substantial and thorough manner in which the work is done, and the administrative ability displayed by Mr. OLMSTED, the Architect in Chief. Of the busy board of draughtsmen, by whose designs and plans the out-door labor is regulated and determined from the offices on Mount St. Vincent; of the Bluff across McGowan's pass, commanding the High Bridge in a setting of verdant scenery, and the bosom of East River, slumbering beyond; of the nurseries around as we descend, and the drains opening into the gorge beneath; of the drive along the grand reservoir from which the thirsty city is to receive its streams of Croton; of Bell Tower Rock tunnelled by an avenue of transverse traffic; of the lake with its two remaining Hamburgh swans, and the iron bridge, in the arch and design of which more than the usual quota of grace and adaptedness has been reached; of the pathways and heights that render the "Ramble" so interesting and attractive, and the effective rustic work of its two summer-houses; of the terrace, the shrubbery and the flower-beds of brilliant color—of all that was embraced in our two or three hours' stay, I can scarcely venture an enumeration—this, and much more, we saw under the polite guidance of Mr. Olmsted and Captain Renwick, for whose courtesies our acknowledgments are justly due.

— Other engagements, a night, and the somewhat annoying delays of a disconnected journey having intervened, I found myself at length boated at Haverstraw on Wednesday morning in company with my present host Mr. Thorne, Hon. Wm. Kelly, Col. Johnson, C. S. Wainwright and A. R. Frothingham, Esqs., for Waldberg, the private landing of Mr. Conger, for whose sale we were bound. There were quite a number of passengers upon the same errand with ourselves—among them Mr. Bradley of Vermont, the Messrs. Bathgates of Westchester, Mr. Thompson of Ballston, and others. From the landing it is an up-hill drive of several miles to the mansion of Mr. C., and perhaps three-quarters of a mile beyond to the farmstead.

The attendance was complimentary, probably numbering not far short of a hundred. Among those assembled whom we were glad to take by the hand, were Messrs. E. G. Faile, Lewis B. Brown, John Jay, L. G. Morris, J. L. Morris, James Brodie, Henry S. Olcott, S. Campbell, Henry Wood, Seneca Daniels, and many more, not to mention less particularly Thomas Galbraith, who keeps watch and ward so carefully over the Thorndale herd. The usual lunch being eaten, the auctioneer, Mr. Leeds of New-York, commenced his task soon after two o'clock.

As the sale had been announced without reserve, all the animals offered, or nearly all, were disposed of—but at prices very low, from the character of their descent and individual merits, as well perhaps as because the terror of the Massachusetts cattle disease had not begun to abate in season to allow of purchasers remodeling their arrangements for the summer. Now that Mr. Conger has disposed of the surplus from his herds, he will go to work with renewed opportunities for successful exertion, and when the public are invited to a second sale at Waldberg, they will at least have the guarantee of the present one, that he will fully and honorably live up to every tittle of whatever announcement may be previously made. The best prices, rather, at this time, were those obtained by the Ayrshires; the Short-Horns and Devons brought little more than fair rates for milch cows or other practical purposes; a stallion and two mares went quite low, and some lots of Berkshire and Suffolk swine scarcely better in proportion. The total of all sales was in the vicinity of $3,000. Mr. Daniels of Saratoga county was the largest purchaser, and bought, it was stated, with a view to carrying a herd overland to the Pacific side early another spring. Among other purchasers were Messrs. John Jay, D. L. Seymour, Henry Wood, E. C. Armstrong, A. R. Frothingham, A. Davidson, F. G. Frazier, F. W. Noble, Mr. Jolliffe, and, of the pigs, Col. Morris and Mr. Bathgate.

— Yesterday morning we called at Springside, when at Poughkeepsie on our way here. Mr. Vassar's grounds are as beautifully kept as ever, and our correspondent, Mr. Bement, as thoroughly engaged among the curiosities and rarities of the Poultry yard. The Fawns of tender age, with their spotted hides, and the parental Deer; the talking Cuckatoo; the Gazelle from Malta, with the roguish grace of its kind; the brilliant Wood Duck, a domesticated Currassow, and the Sand Crane with his hoarse voice, are among the aristocrats of the place, not to descend to such as fancy Rabbits and Dominique bantams.

And then succeeded a drive over the well-cared-for roads of this part of Dutchess, to the scene of the present writing, where I have been looking at the Short-Horns, the South Downs, and the swine of Essex birth. Of none of them am I proposing to inflict upon the inappreciative reader a prolonged critique. No establishment has ever better proved its own advertisement. The full accounts of the English herds, in the Farmer's Magazine of London, have brought us from the pen of the Druid, more than one allusion to the strife for the "Duchesses" at the Tortworth sale; but under Mr. Strafford's revision, their author should not have ascribed to "an American company" what was due alone to the enterprise of an individual. A pleasant style, mingling the language of the sportsman with the odd epithets of the herd, dotting out a landscape or a farm by apt recurrence to familiar names,—by no means too exacting as a judge, but more ready to sketch kindly than cruelly—a fault or two is surely pardonable in the genial writings of Mr. Dixon, and I can wish him no better luck than sometime to be sharpening his pencil and his wits under the guidance of Thomas, in the farmstead at Thorndale.

By comparing the herd of Short-Horns at present here, which numbers as usual nearly seventy, with the catalogue of last years' issue, we have a twelvemonth's farther witness of what our friend can accomplish with the best of English blood on American soil. Just a score of young things are to be chronicled as coming on, to replace the sales of 1859 and the sad loss by lightning of imported Maria Louisa and 1st Duchess of Thorndale. Grand Turk of Bolden's breeding and 2d Grand Duke from Tortworth Court, are finding their successors in the Thorndale Dukes, and Lalla Rookh with all her propensities to flesh was not too hearty to leave a young roan in the breeding boxes last December, which promises to do justice to his descent on either side. During the four years since I had had the opportunity of visiting Mr. Thorne, (see Co. Gent., June 5, 1856,) the buildings have been "straightened out" and many improvements introduced, and now in completeness and convenience, they compare favorably with any similar establishment I have seen on either side the water. Indeed, there is much that might be advantageously noted down for practical imitation, as there are also many details of interest in the general farming of Dutchess, which hereafter I may be able to present more fully and satisfactorily than in the present haste.

The story of Dutchess farming, however, is nearly that of many other of our older districts. It is a story of wheat culture nearly abandoned on a scale of much extent; of the feeding of more cattle and sheep, and, along the railway lines of the Hudson and Harlem, of the production of milk for the New-Yorkers; of improvement slowly gaining ground among a class of cultivators not too poor to have lost often their thousands in Western speculation,—whither, also, and to the cities, has too often ebbed the tide of younger blood, leaving age in the enjoyment of competence it is true, but lacking the enterprise and energy that are found when younger muscle holds the plow and gathers in the harvest. Improvement particularly in better tillage; improvement more slow in greater manuring and the growth of root crops; while, here and there, we find a farmer who is breeding up his stock to higher grades, cautiously buying a few pure breds, or depending upon a Short-Horn or Devon bull to work out the amelioration of its descendants. Such men as A. M. Underhill and Elihu Griffen of Clinton, R. G. Coffin and

Stephen Haight of Washington, Gideon Vincent of Union Vale, D. B. Haight of Dover, James Haviland of La Grange, and more whose names should be also catalogued among the good farmers and more careful stock-raisers in the county, are instances in point. With several of them, I had the opportunity of some conversation, and shall hope hereafter to extend my knowledge of their practice.

I have had also an interview with a very sensible and I believe a thoroughly qualified and experienced English veterinarian, Dr. H. MOORE, of Poughkeepsie, who has been for some years practicing in this country, but who did not leave Great Britain until after the importation there of the Pleuro-pneumonia from Holland, with which he appears to be fully conversant. All that he said strengthened my confidence in the entire correctness of the conclusions expressed in a late number of the COUNTRY GENTLEMAN, and in the soundness of the recent action upon this subject of the Executive Committee of our State Agricultural Society.

Here the country has been suffering from drouth. The corn is looking pretty well for the season—some say better than usual; the fields are certainly very clean, but must now be needing rain. Grass is getting more and more parched with every day of sunshine. Rye and wheat are rather light, I believe; oats had been coming on fairly until the present dry time, and may yet give a fair yield. They have a way here, quite commonly in vogue, I was told, although new to me, of sowing white turnips in the corn, at the time of the last cultivating, even as late as the 10th of July, and thus obtain often a good crop of this useful root with comparatively little expenditure of time and land. L. H. T.

◆

CULTURE OF HARD-BAKED SOILS.

To produce a proper seed-bed on a heavy or hard-baked soil, is always a difficult matter, requiring a great amount of labor, and often resulting imperfectly at last. Various methods of performing the work have been proposed, and a few thoughts on the subject may interest those of our readers who have to do with such soils.

If land containing a certain proportion of clay be plowed in the usual manner, comparatively *dry*, it will present a greater or less proportion of chunks or clods, of a size proportioned to the depth of the furrow, and the baked state of the soil, and very far from affording a seed-bed likely to produce any profitable crop. If plowed when comparatively *wet*, and dry weather follows before any further cultivation ensues, the same cloddy state is the result, nor would the preparation of the soil be enhanced by any working given while the soil was in a plastic state. To produce the best results in the easiest way, such soils must be worked when *just dry enough to crumble down;* when not so wet as to knead, nor so baked as to require great force to break it up, and only in chunks at that. We find it difficult to explain the matter plainly, but every farmer will understand our meaning from his own experience.

The question, then, is not when and how shall we best cultivate heavy soils; but how, when a heavy soil becomes baked, shall it best be pulverised—best reduced to that state of fine tilth to furnish a proper seed-bed for our crops. We cannot always take advantage of that crumbling stage of a heavy soil; our forces may be otherwise employed, or insufficient to do all our plowing while the ground is properly moist; hence we must look for other means to accomplish our ends.

A late number of the Boston Cultivator well describes the method employed in Great Britain. From the mildness of the winter of 1858–9, much plowing had been done on the tenacious soils, but owing to an extremely wet spring last year, followed by a remarkably dry summer, the land was in a hard baked state—the winter furrows lying in chunks and clods, almost like brick for hardness, but of much greater size. The turnip-sowing season was at hand, but the weather still remained dry, the clods showed no signs of crumbling. Something must be done or the season would be lost.

"The first operation," generally, "was to go over the land with grubbers. These penetrated to the depth of the furrows, breaking some of the largest lumps, and leaving nearly all of them on the surface. The crushers followed. It was not always that the so-called crushers were used. The ordinary form of roller, made of iron, stone or wood, was sometimes used. Yet on the hardest soils, the clod-crusher did the work not only the most expeditiously, but the most effectually. The clods were principally broken sufficiently fine with once going over. They probably would not have been if the crusher had been put immediately on the rough furrows, unprepared by the grubber."

It has been objected to the use of the clod-crusher, that it consolidates the under part of the soil. A roller, a heavy harrow, or even a common cultivator produces the same effect. Hence

"A Scotch farmer would not think of leaving his clay land just as a heavy clod-crusher had passed over it. He follows it with a grubber. This does not pack the soil; it lifts and lightens all the plow had disturbed, or even more if it is desired. If lumps have escaped the crusher, the grubber brings them to the surface, where the next passage of the roller or crusher crumbles them. The operations are repeated till a proper seed-bed is obtained. We saw plowed fields, the furrows of which were baked like sun-burnt brick, brought to a deep, mellow tilth, suitable for root-crops. Still it could not have been done by the clod-crusher alone. The alternate action of the crusher or roller and grubber, chiefly did the work."

Implements like the grubber and clod-clushing roller, are not adapted to land filled with stones, as are many of the heavy hard-pan soils of this country. Our clays, however, are usually free from them, and here their introduction would accomplish a good work. The latter has been introduced to some extent, and is found to work well.

In some remarks at the annual meeting of the State Agricultural Society, Hon. A. B. DICKINSON took a decided stand against the clod-crusher, giving his method of cultivating hard baked soils, by once plowing, so as to reduce them to the desired fine tilth for a seed-bed. . This was to "set a sharp plow so as to cut twelve or fifteen inches deep, and from one to two inches wide, depending on the condition and certainty of its dissolving, of which every farmer, experienced in soils, can judge,"—and then to "shave up the hard soil without turning it over, but simply shaving it off far enough to make room for the next slice. The mold-board should be sufficiently high to raise it 2 feet, as the solid compact soil, when shaved up in this manner, will be increased in depth from its original twelve or fifteen inches to at least two feet."

We have no doubt from some experience with this method of plowing, that its effect would be precisely that stated by Mr. D., and that once plowing would effectually pulverize the heaviest soils. It would be difficult, however, to procure plows wells adapted to the work, or plowmen with a sufficient stock of patience to proceed thus slowly with an implement which they are in the habit of crowding to its fullest width of passable performance in the inversion of the soil. Yet there is hope in the case; we see much more thorough culture and care among farmers than formerly, and we shall in time learn to "make haste slowly," in order to ensure the attainment of the great ends in view.

A farther remark by Mr. D., is thus commented upon by the Boston Cultivator, and the paragraph is worth quoting here:

"A remark of Mr. D.'s in regard to the degree of pulverization that is desirable, is particularly worthy of notice. He thinks "all experi enced wheat-growers will agree that wheat does much better where the soil is left a little coarse, or a portion of it in small chips, than where it is all pulverized and made fine." There is no doubt of this fact. Yet we frequently hear talk about the necessity of making the soil as fine as possible for ordinary crops. It is bad advice. Clay soils, reduced to powder, soon become puddled by rain, and run into mortar, to be baked by dry weather into a mass impervious to the roots of plants. By leaving them in the state described by Mr. Dickinson, the rain passes through as fast as it falls, and they remain comparatively light and friable."

SETTING OUT AN ORCHARD

Eds. Co. Gent.—I propose this fall to set out 250 standard pear trees—500 dwarf pear trees—500 apple trees—2 acres of strawberries—1 acre Lawton [New Rochelle is the proper name] blackberries, and 1 acre raspberries.

Will you please inform me through your paper—1st. What will be the probable cost of the above?—2d. What will be the best time to set out?—3d. Will it be necessary to plow or break up the whole of the land, or will it do to subsoil for the berries, and leave the balance until a year or two, only preparing the space necessary for the trees?—4th. Will the crop of strawberries *next* season, be apt to pay expenses, provided a market can be found that would net me $6 per bushel?—5th. What should the distance apart be for the apple and pear trees?—6th. The number of raspberry and blackberry vines required to fill one acre each?—The best manner to set out each of the above lot? J. P. D. *Chicago, Ill.*

The cost of the above would be about as follows, the prices varying, however, with the size or quality:

250 standard pears, $30 per 100,	$75.00
500 dwarf pears, $20 per 100,	100.00
500 apple trees, $10 per 100,	50.00
2 acres strawberries, say 40,000,	200.00
1 acre Rochelle blackberry, 1,200, $4 per 100,	48.00
1 acre raspberries, 2,000, $4 per 100.	80.00
Expenses of transportation, say,	47.00
	$600.00

The strawberries may perhaps be obtained cheaper, if a large patch of the right sort can be found, where the owner would be glad to get rid of his surplus plants at a low rate.

The best time for planting all these is in the spring, but the trees should be procured in autumn, when a better selection may be obtained, and when the delay of transportation would not interfere with early setting; when received, they should be securely "heeled in" for winter, by burying the roots and half the stems with mellow earth, taking special care to fill in with fine earth all the interstices among the roots, in the most thorough and compact manner. If evergreens can be had, it will be sufficient to cover but a portion of the stems with earth, if the tops are well protected with a layer of evergreen boughs—otherwise it would be safest to cover nearly the whole of the stems and branches with earth. It is indispensable that a dry spot be selected; and if danger is apprehended from mice, the earth should be high banked up all around, and made smooth, as mice will not ascend a bank of smooth bare earth under snow.

The best time for setting out the strawberries is in spring; but if our correspondent does not wish to lose time by waiting so long, he may put them out now, or as soon as the crop of berries has disappeared, and by taking sufficient pains, they will grow and bear a fair crop next season. If set now, all the large leaves should be cut off, the roots dipped in mud, and the plants watered when set, and then mulched with an inch or two of fine manure. If set much later than the present time, the plants will not become sufficiently strong and established to endure the coming winter, and the plantation will not be so good as if set early next spring. The Wilson strawberry may be relied on for 150 or 200 bushels per acre under the best culture; and plantations set now may bear 50 bushels next season. Our correspondent can make the rest of the estimate as to profits.

The whole surface of the land should be well prepared, except it be for the apples and standard pears. Strips 6 or 8 feet wide will do for a year or two, not longer; but if grass grows between, great care must be taken to bank up every tree late in autumn, with mellow earth, made compact and smooth, to prevent the attacks of mice. The standard pear trees may be about 20 feet apart, the dwarf pears 8 or 10 feet, or 6 by 12 or 8 by 12—the apple trees 30 to 40 feet. The strawberries may be set out in rows about 2½ or 3 feet apart, and about one foot in the row, for horse cultivation. The blackberries may be six feet apart, or perhaps better about 5 by 8 feet—the raspberries about 3 or 4 by 5 feet.

Sandy and Clayey Soils Contrasted.

A writer in the Rural New-Yorker, speaking of a recent mention of the advantages of a clay soil, by a correspondent of this journal, draws a contrast between light and heavy soils, from which we condense the paragraph below:

Clay has a strong affinity for ammonia; sand has little power to retain this essential gas. But after a summer rain a clay soil crusts over thickly, and refuses atmospheric food until the crust is broken; if not worked, in hot dry weather, the soil soon cracks several inches deep. Hence, though a sandy loam requires more manure than a clay, it requires enough less labor to make up for this, and if dressed with clay occasionally, will soon acquire the power of holding manure. So clays dressed with vegetable manure and underdrained, do not crust so readily or deeply, and properly worked will produce heavy crops of grass and grain. "It is true," adds the writer, "that a clay loam if well underdrained, is the best soil for grass, and that it will form a stiff sod quicker than a sandy loam. But while you can permanently amend a sandy loam, and make it forever retentive of manure by light applications of clay, which the frost will pulverize on its surface, you cannot lessen the tenacity of a clay loam by a mixture of sand. Clay and sand, particularly our calcareous clay, unite chemically, and form an adhesive mortar which when dry brings fire from the hoe."

A GOOD USE FOR DOGS.

At one of the meetings last winter of the Shelburne Farmers' Club, the subject of manures was up for discussion. Mr. D. O. Fisk spoke of the importance of taking better care of this important article by saving what we *do make now*, by covering the manure heap, making cellars under every barn, applying plaster, muck, loam, and anything that will answer as an absorbent; thus saving that valuable portion of every farmer's capital—the liquid manure. He objected to the practice of buying foreign or patent manures extensively; likes guano, but cannot afford to buy it; thinks the money required to purchase a ton of guano, laid out in corn and rye and fed to *working hogs properly managed*, will yield *double* the profit to any farmer in this town. He spoke earnestly in favor of doing something for pasture lands—the right arm of every farmer. In closing, he very properly rated *animal manures* as taking the lead of all others, and, under this head, gave the following receipt; mix with ten loads of muck, five dogs, (!) one barrel of lime, ten bushels of unleached ashes, compost thoroughly, and apply liberally.

Induce the farmers of the country to practice largely on these principles, and there will be a better prospect for profitable Sheep Husbandry among us, as well as for good crops of corn and wheat and grass.

[For the Country Gentleman and Cultivator.]

Raising, Hoeing, and Thinning Out Root Crops.

Eds. Co. Gent.—Hoeing carrots and other root crops being now in order, with those that raise such crops, and several farmers having called on me and wondered that I got along so easily with my roots, and that my carrots, parsnips, &c., had so much less weeds among them than theirs had, it has put me in mind of writing, and letting the numerous readers of the Co. Gent. know the course I pursue to raise these crops, hoping that any one who has tried the course here recommended, as well as other methods, and has found a better way, will let us know all about it.

The first thing in raising roots, is to get the land as clean and free from weeds as possible. To do this, the ground should be plowed as soon as it is dry enough in the spring. Then harrow lightly, and let it lay until the weather gets warm and the weeds well started. Then I begin with the part intended for parsnips, which are sown about or a little before the middle of May, or a little before corn planting—and give the ground a thorough working, thereby destroying the worst crop of weeds of the season; and in fact doing the first hoeing before the seed is sown.

The land for carrots and mangolds, is prepared the same way, a week or two later. The ground for ruta bagas, sweet turnips, &c., should be worked over about the same time, and then again before sowing, which should be done sometime the fore part of June.

In raising roots, plenty of seed should be sown, not only to ensure a good stand of plants, but it is much easier to hoe up all that are not wanted, where they are too thick, than it is to look up the scattering plants when they are small, and not easily seen among the weeds, while there is no difficulty in seeing the rows when they stand thick, and they may be be hoed up much closer, leaving a very narrow space for the plants, and but few weeds standing, that will have to be taken out one at a time.

Now we come to hoeing, and find—if the land has been well attended too, for a year or two back—that there is comparatively few weeds, and that these have not got much the start of the crop yet, as we hoe about the time the rough leaf begins to start. We also find that the plants stand very thick in the row, perhaps ten times as many as should be allowed to grow; and to a new beginner, it looks like an endless job to weed and thin them out. But with a light new hoe, with the corners standing out well, we commence first by hoeing along each side of the row, hoeing up weeds, plants and all, except a narrow strip, about half an inch in width, more or less as the plants stand thick or thin, in the center of the row. Then with the corner of the hoe pick out the weeds from among the plants that are left. There still being many more than we intend to grow, we find it a very good way to do part of the thinning out the first hoeing, so that in taking the weeds from among the plants, it is very easy to hoe out a portion of the surplus plants, still leaving more than is intended to grow to be taken out the same way when they are hoed again, thus doing all the weeding and thinning out with the hoe. There is much less difficulty in doing this than at first sight might seem to be the case. The new beginner will have to be a little careful at first, and learn to carry a steady hand; and also learn the many different ways the hoe can be turned and applied, so as to bring the corner on to any weed that may be standing very near to the carrot, or any other root he wishes to save, in such a manner as to remove the weed without injuring the plant. This, though it will appear somewhat difficult at first, is easily done when a little used to it, and he will soon learn that by carrying a steady hand and turning the hoe the many different ways that may be required to meet each particular case, that he can weed and thin out roots much easier and faster with a hoe than he can with his fingers. He will also soon learn to have confidence in what he is doing, and be able to make as quick and handy motions as in ordinary hoeing.

Another thing in regard to hoeing roots is, that it is easier, cheaper, and better for the crop to hoe often, and thus not only keep the ground mellow, but by hoeing before the weeds get much size they are scarcely any trouble, except what few may be in the rows, and these being small are easily taken out with the hoe. It should always be kept in mind that a small weed can be taken out of the row easier and quicker with a sharp cornered hoe than with the fingers, while a large one, with strong spreading roots, can only be removed by hand, with more or less difficulty and danger to any tender plant it may be near to.

All roots should be attended to, more or less the latter part of the season, and on no account should any weeds be allowed to go to seed. There are many kinds that will come up and go to seed after the usual time of hoeing is past. And although they may not make much of a show in the crop, yet there will be sufficient seed matured and scattered on the ground to make trouble for years after. While it will take but very little time to go through them two or three times in the latter part of the summer and destroy all the scattering weeds that make their appearance. By so doing, and manuring with well rotted manure, roots can be grown on the same land year after year with but little trouble from weeds. The different kinds being made to succeed each other in rotation, will, in a great measure, answer as well as raising them in rotation with other crops.

Another advantage in having several different kinds is, that not being all sown at one time, the hoeing wont all come at once, but may be done at odd spells so as not to interfere with other work on the farm but very little.

Western N. Y., June, 1860. P. F.

[For the Country Gentleman and Cultivator].

Trailing Annuals and their Enemies.

Eds. Co. Gent.—Last year I gave you a remedy for the attacks of insects upon melon, cucumber, squash, pumpkin, and other vines, which proved the most efficient among the almost innumerable remedies advanced by books, papers, &c., in every direction. But this year I have hit on one still more efficient; I might say, effectual. It consists simply in placing calls or small cages, each containing a hen with her chickens, in different parts of the "patch,"—say 40 or 50 feet apart. The chickens not only eagerly seek and devour the insects, but also keep the bugs in continual motion, they being very timid and easily scared, especially the striped bug. One little chicken, with keener eyes and nimble legs, is worth half a dozen men. The application of liquid manure is also strongly adviseable. I almost despaired this summer of being able to raise a single melon, until, as a *dernier resort*, I luckily hit upon the "Eureka." Necessity is indeed the mother of invention. Try it readers of the Country Gentleman, and report your opinion. Charles Stewart. *Penn.*

[For the Country Gentleman and Cultivator.]

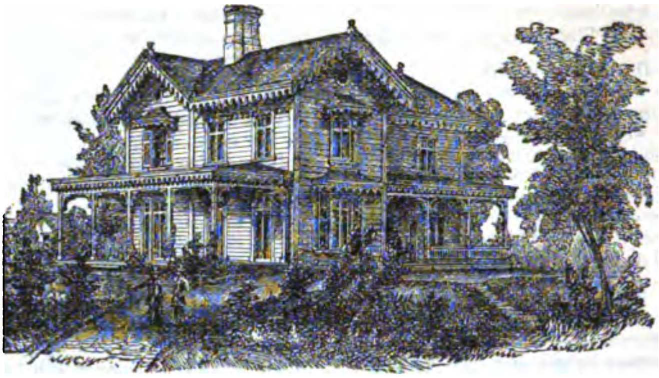
PROTECTING TREES FROM RABBITS.

Messrs. L. Tucker & Son—I noticed in Country Gentleman, one of your correspondents is at a loss to know how to protect dwarf trees from rabbits. My plan is simple, effectual and durable. I make one tree protect another. Select chestnut saplings, rather larger in diameter than the stock to be protected; slit the bark say two or three feet; ring top and bottom; twist the bark off and enclose the stock; it will remain on for three or four years. I think there is another advantage; in locations subject to late frosts, it would prevent the sap from rising, acting as a shade to the stock. Wm. McKibbin.

Buck Valley, Pa.

To Destroy Worms on Apple Trees.

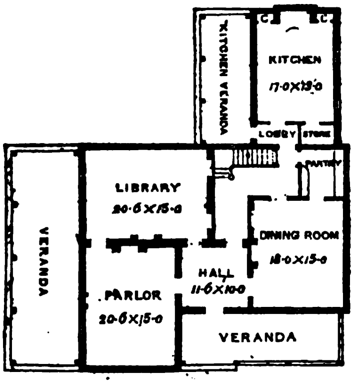
In the morning when the worms are in their nests, take a shot gun and climb the tree; put in a charge of powder, (without shot or wads, of course,)—put on a cap, hold the muzzle about a foot from the nest, and discharge the piece. Thousands of nests can be obliterated in a short time. A single trial will convince a man whether it is best to set a few trusty boys at the work. B. *Conn.*



AN IRREGULAR COUNTRY HOUSE.

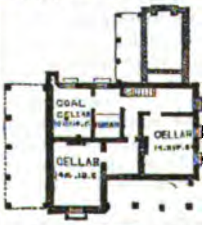
We are indebted to **Calvert Vaux's** excellent treatise on "Villas and Cottages" for the accompanying design and plans of a Country House of some pretension. Mr. V. remarks:

"This design was prepared and executed for a gentleman of Newburgh; and the general idea of the plan includes so much that is called for by the American climate and habits of life in the northern states, that it will probably be better worth the attention of those who wish to build a moderate-sized cheap house, with a kitchen above ground, than many other plans of more pretension. It possesses one convenient quality, which some other styles of plans cannot be arranged to include, for it admits of many modifications, without sacrificing its advantages. It may be completely altered in outside appearance, and doubled in extent of interior accommodations, and yet be in reality the same plan. It can be adapted to almost any situation by a proper arrangement of the roofs. Thus, for example, on an elevated and somewhat open site, such a one as this house occupies, a roof of only moderate pitch is desirable. On level ground, or in a valley, a high pitched roof should be preferred It is also an economical plan for the accommodation afforded, as will be seen by the particulars of cost that are annexed. The house, as now finished, is constructed with an eight-inch brick wall, furred off off outside, and covered with clap-boards in the ordinary way followed in a wooden building. This plan of construction was adopted in accordance with the special request of the proprietor, who preferred it to any other method. Its advantages are, that it secures to a certainty a perfectly dry interior wall. On the other hand, it seems undesirable to have a brick house and to give it the appearance of a wooden one, as brick is the superior and more durable looking material. The accommodation may be thus described: A veranda-porch on the east provides a covered approach to the front door. The principal hall, 11 6 by 10 feet, gives access to the parlor and library, both of which are on the south of the house, and also to the dining-room. Another door opens on to a staircase-hall, which is easily accessible either from the principal rooms or from the kitchen wing. This is desirable, as the scale of the house would not warrant a second staircase. An east and a south veranda are supplied to the principal rooms, but each has windows that are unobstructed by any veranda. The dining-room connects through a pantry with a kitchen wing, which is also approached from the main body of the house under the staircase. A lobby opens on to a kitchen veranda facing south, that provides a servant's entrance, and is convenient for hanging out clothes under cover in rainy weather. A kitchen 17 by 13, fitted up with closets, wash trays and store-room, completes the accommodation on the main floor and wing. By this plan the disadvantages of living in the basement are entirely avoided, and the lady of the house can superintend her servants with ease and comfort.

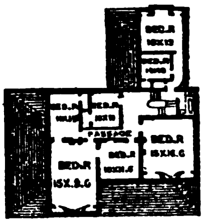


PLAN OF PRINCIPAL FLOOR.

"In the chamber plans will be found five bed-rooms and a bath-room and water-closet; and in the wing two bed-rooms and a house-maid's sink. All these rooms are supplied with registers near the ceiling, that communicate with foul air flues separate from the chimney flues. In the garret over the bath-room is a large well-lighted linen-room; and as this is planned on the half-landing, it is very easy of access from the chamber-floor. A large store-room, the size of the bed-room over the dining-room, is finished off under the roof in a common way, and is secured with a door after being enclosed from the stairs by a plastered partition. The remainder of the space is open and unplastered. It makes a very roomy garret, with plenty of headway all over it; but the windows in the peaks are of course close to the floor, and it was never intended that any bed-rooms should be fitted up here. The roof is covered with shingles, the flat being floored and covered with canvas. In the basement are cellars and furnace-room, the kitchen wing foundations not being carried down farther than was necessary to keep clear of frost. In this house special precaution was taken, by the proprietor's request, with regard to the plumber's work. All the pipes, hot, cold, and waste, were enclosed in a tin envelope fitted tolerably close to the pipes. As the work proceeded, this tin case was soldered up every here and there, and particularly where the pipe is led through the wall, in the first instance, and where it starts from the boiler. By this means the little insects that work their way from below, and are often found about water fixtures in rooms, are prevented from crawling up and down, and breeding among the warm pipes, as they are tempted to do in many situations.



Basement.



Chamber Plan.

"The carpenter's contract for this house was taken at $3500; the mason's at $2500; the remainder of the work was done by the day.

"After the contracts had been made, the proprietor left the work entirely in the hands of the architect; and with the exception that hard walls were substituted for brown walls throughout, and that some trifling alterations were made in the arrangements for the linen-press, the plans, as signed, were faithfully executed for the contract amount, without any difficulty whatever. The carpenter's and mason's extras, which amounted to $350, included the change from brown

wall to hard finish, and all the work appertaining to a large out-building at some distance from the house."

It will be perceived that this house, which cost about $6000, might have been built much cheaper of brick in the ordinary way; and at a still less sum, or at one-half its actual cost, if built of wood only. We do not recommend it for its mode of erection, but for its admirable plan and fine exterior views.

WHEAT CULTURE ON LIGHT SOILS.

By a "light soil" we mean one of a loamy and porous character—the opposite of those containing considerable clay, and "heavy" or compact in their nature. A sandy or gravelly loam, never becoming baked into clods, presents very different characteristics from one liable to the latter state, under certain conditions of drouth and moisture, and may be cultivated in a different manner, and with far less regard to times and seasons. Hence we have thought best to divide some hints we propose to offer on wheat culture—giving in another article some thoughts on the preparation of heavy soils.

In the first place, we may remark that summer fallowing, save for the simple purpose of cleaning the land of weeds, is not essentially requisite for wheat growing on light soils. Indeed, it may be injurious rather than beneficial, by producing too light a state of the surface soil for this crop.

If the land be weedy, however, a thorough summer fallow will most thoroughly eradicate them from the soil. Weeds, as we have said before, have been divided into two classes; those which increase by their seeds, and those which are propagated principally by their roots—an essential distinction as regards the means used for their destruction. The weeds produced from seeds can only be eradicated by burying all the seeds where they will germinate—near or upon the surface—and then destroying them by tillage. To this end not only should the plowings be frequent but the division of the soil as perfect as possible. To destroy weeds which propagate by the root, we must bury them deeply and perfectly with the plow, or by shallow surface tillage cut them up by the roots and expose to the sun and air.

On light lands, not particularly weedy, what is called a "green fallow" may be employed. Field peas sown thickly will effectually cover the surface and smother all other vegetation, as well as ripen sufficiently early for wheat sowing. They take little from the soil, and leave it in a fine, mellow state, ready with a single plowing for the autumn crop. Beans, planted in drills or hills, have the advantage over peas, that they may be cultivated during their growth, and the preparation of the soil thus furthered during the summer. They are of the same character in their demands upon the soil, but do not always ripen as early as is desirable in order to prepare in good season for wheat. Corn is a good cleaning crop, but ripens too late for wheat, as well as takes from the soil the same elements as the latter crop. The same is true of timothy, and this is an important reason why wheat growers should prefer clover hay and pasturage, especially on their wheat soils.

A light soil, say a clover ley, if sufficiently rich for wheat, may bear an intervening crop of peas or beans, and then be sown to wheat without additional manure. But if not in good heart, or if any spring grain crop be grown during the summer, it may still grow wheat if properly manured for that crop. We have now a good crop of wheat on the ground, sown after barley and spring wheat, with some twelve loads of fine compost (muck and barn manure,) per acre. Twenty loads would have given a better crop, and few light soils, whatever their condition as to fertility, but would bring profitable returns for the application of manure; not deeply covered, but placed near the surface.

As to the depth and character of the plowing, it must depend to a great degree upon the nature of the subsoil. If readily made fertile, it should be brought to the surface, and deep plowing would produce the best result. If sterile, we should not advise exposing its barrenness, but would break its depths for other than the wheat crop, plowing in the fall or subsoiling for some spring grain or root crop.

A loamy soil, in clover, may be broken up after the hay is taken off, and then, aided by a light dressing of manure, produce a good product of wheat. It should be turned under with a flat furrow, and the manure worked in thoroughly with the surface soil. We have found a light plow, or gang-plow, an excellent implement for covering manure, and also for wheat, and prefer to use it without any subsequent employment of the harrow, in order to leave the surface in ridges, the better to retain the snows of winter, as well as by their crumbling down under the spring frosts, to furnish a mulch for the roots of the wheat growing in the furrows, thus enabling the plants the better to withstand the winter.

There is this advantage in devoting light soils to wheat growing—the labor of preparation is less than that on heavy soils, and their warm, quick character hastens the maturity of the crop, thus furnishing additional security against the attacks of that potent enemy, the wheat midge. The heavy soil, properly prepared and in favorable seasons, will produce the largest crop of wheat, and that of the best quality; but under less favorable conditions, presents greater liability to failure. To these considerations we shall give some thoughts hereafter, and hope our readers will join with us in the discussion of the whole subject of Wheat Culture.

[For the Country Gentleman and Cultivator.]

IMPROVEMENT IN THE HAY-RAKE.

I have a small but very important improvement on the Revolving Horse-Rake. It consists simply in bolting the handles and side-pieces fast together at *a*, (Fig. 1,) so that there is no spring or working, as is usually the case. The piece of wood that holds the steel spring on the handles, is about 12 inches long, 1½ inches thick, 4 inches wide, represented in side view by Fig. 2; *b* is the spring, 1½ inches wide, with a bend at the bottom upwards, half or three-quarters of an inch, to prevent the spring from getting out of place when the rake revolves; *c*, (Fig. 1,) shows the steel spring as resting on the rake-tooth, holding it firmly.

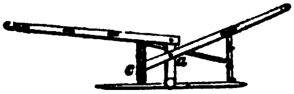


Fig. 1.

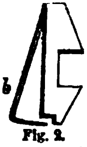


Fig. 2.

You will discover by this arrangement, that the rake is bolted together on both sides with two good bolts, with nuts to them. Understand there are two springs, resting on two rake-teeth, and when the rake revolves the springs work like a charm. As usually made, the above named pieces of wood are nailed on slanting, and spring outward when the rake revolves; the handles, resting on round pins, allowing the rake-teeth to spring them in at every revolution.

This rake, made as I have endeavored to describe, makes the rake all solid; the two steel springs give way for the revolution of the rake, and instantly springing back to their place and holding the teeth firmly until you let them loose again by raising the handles of the rake.

These springs can be put on any rake, by shaving off the lower end that rests on the rake-teeth and screwing on these steel springs. The expense will not be over fifty cents. A. D. Brown.

Any person who uses the revolving rake, as now constructed, will understand it in a few minutes by comparing this description with his rake, while it is in operation. As usually made, the handles are made to act as springs, springing nearer together as the rake revolves and passes the sloping wood pins attached to their forward ends. The improvement of our correspondent supersedes the spring of the handles, by attaching steel springs at their forward end. The figure of the revolving rake given on p. 122 of vol xiv, of the Country Gentleman, does not represent this attachment, that figure having been drawn upon before this modern improvement was introduced, but all may be easily understood by examining any rake of present construction.

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[For the Country Gentleman and Cultivator.]

Visit to the Society of Shakers, Canterbury, N. H.

THEIR NEWLY ERECTED BARN, FARM CULTURE, STOCK, GARDENS, ETC.—STATE OF THE CROPS IN THAT PART OF NEW-HAMPSHIRE.

Eds. Co. Gent.—On the 28th of June I visited the Society of Shakers in Canterbury. Their village is some 15 miles north of Concord, and nine east of the Merrimac river. They own about 2,500 acres of land, lying in nearly a square body. The society is composed of three families. The north family has a population of between 50 and 60; the middle family numbers over 80, and the south has about 150—there being about 300 in all.

The south family own about 1,700 acres of land, 600 of which is improved, the balance in pasture, wood, timber, &c. The large and beautiful village is located upon an extensive ridge of land, and can be distinctly seen from a distance of more than twenty miles, from various points of the surrounding country. The dwelling houses are large, substantially built, and finished in the most thorough manner, with every convenience for saving and economizing labor, and are kept with the most scrupulous neatness. Several of the houses are of brick, three stories high, besides the basements. They have numerous workshops and other buildings for the manufacture of a great variety of wooden wares, brooms, &c., and for the drying and preparation of medicinal and other herbs and roots, and the manufacturing of medicines of various sorts, all of which are put up in the neatest manner, and without adulteration; whoever purchases the unbroken packages as they come from the hands of the Shakers, may rest assured they are what they purport to be.

A large portion of their cultivated land (in this my remarks will apply wholly to the large or south family,) is of rather a heavy, moist, strong soil, and is not so well adapted to the growth of Indian corn as to that of the hay crop. The production of hay seems to be the great object at which they aim in their farm culture. They turn over sward land in the autumn—following season plant with potatoes; next, in corn, without manure,—corn with them being a secondary object. Two years' cultivation eradicates weeds, grasses, &c., and leaves the ground in a situation to produce heavy crops of clean grasses. In stocking down to grass, they use barley in preference to oats or wheat. In the spring, before plowing for the barley, they apply from 50 to 75 cart-loads of manure from the barn cellar; a large crop of barley follows, succeeded in after years by larger crops of hay—for the two or more years after being laid down to grass, two heavy crops are annually mown. In my ride to Canterbury, some twenty miles, I saw hundreds of acres of grass fields, that will yield most meager products. But it is a rich treat for one to cast his eyes over the extensive and luxuriant mowing fields of the United Brethren at Canterbury. They had already secured a large amount of hay, being obliged to cut it thus early upon account of its being badly lodged. Their extensive grounds, devoted to the cultivation of almost every kind of garden vegetable and esculent for family use, and for that of medicinal herbs and roots, in point of clean and careful culture, and straightness of rows, would compete successfully, if placed by the side of Chinese or Flemish garden culture.

They cultivate fruit extensively, having one apple orchard of twenty-five acres, and large numbers of pear trees, and an abundance of strawberries and other small fruits and berries, as also flowers in great variety and profusion; and we doubt not these are fully appreciated by the kind hearted and modestly attired sisters of the fraternity.

One of the more recently attractive matters connected with this family, is their large, new and expensive barn,[*] the main body of which is 200 feet in length, and 45 in width, with a projection at each end of 25 feet long and about 20 wide, thus making the whole length about 250 feet. There is a handsome walled basement or cellar of the same size of the main part of the barn. From the sills to the eaves 34 feet. There are three floors running the entire length of the main buildings, the hay being carted into the barn on the upper floor, so that most of it is "pitched down instead of up." The floors, partitions and ceilings are all planed and finished off, as nice as a dwelling house. There are two hovels extending the whole length of the barn, the eastern divisions of which are for milch cows, with slip stanchions for tying up twenty-three cows in each. The cows have been so trained that they pass into the hovels and take their places with the regularity of well drilled soldiers. The name of each cow is printed on slips of paper, in large letters, and tacked on the joist overhead. Like the "world's people," they select fanciful names for their cows, such as Tamarind, Flora, *Crinoline*, &c. By a very simple arrangement, the turning of a short lever, fastens or unloosens the heads of all the cows in "the twinkling of an eye." The cows are milked at about six o'clock in the morning, and between four and five in the afternoon. They are in the pasture night and day, except while being milked. The cows are of mixed and various breeds, such as Durham, Devon, Ayrshire and 'native,' and the various crosses resulting from a mingling of these several bloods. They have five yoke of work oxen, averaging over seven feet in girth, besides large numbers of young cattle, sheep and superb horses; but they do not go the "whole hog" in pork raising—not so much as keeping a pig. In fact they neither eat pork, ham or lard. The waste matters from the kitchen, tables, &c., are in part fed to their fowls, the ballance goes into the compost heap. The skim milk is made into cheese, both Dutch and pressed. The whey from the cheese vat, (and there is a good deal comes from the daily making of two 50 or 60 pound cheeses,) passes off through sewers, and irrigates their grass lands. It would gladden the heart of Mr. Mechi to witness the results of irrigating grass lands with whey.

But to go back to their barn. The roof is nearly flat, double boarded; then covered with three layers of stout sheathing paper, saturated with coal tar, upon which is spread a thick layer of coal tar and screened gravel. The sides and ends of this large barn—(and two others to be described,) are shingled with good pine shingles of 16 inches in length, being laid but four inches to the weather. From the center of the large barn, on the south side, extends a two story building 100 feet in length by 27 feet in width. The loft is for the storage of hay, grain, straw, &c. The lower portion is divided into several rooms for calf-pens, store-room, hospital for sick animals, &c., and a well finished room for the herdsman. The roof of this, as well as that of the sheep barn, now being built, is nearly flat, covered with tar, gravel, &c. The sheep barn is 108 by 43, three stories high. The drive-way, for the cartage of hay is 17 feet wide, the floor of which is level with the girths; two loads of hay can be driven in abreast;

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[*] Costing $20,000.

and at the south end it is wide enough to turn round with the cart, which can be driven out instead of "backing out." The ends of the large barn are so graded that the teams pass in at one end and out at the other. They intend putting up a large shed extending from the southwest corner of the barn—as does the sheep barn from the southeast—running south. The barn-yards will be separated in the middle by the 100 by 27 feet building, and screened from winds by the sheep barn and building yet to be erected. The yards will be about 100 feet square, abundantly supplied with water.

The Canterbury and Enfield Society of Shakers own about 700 acres of "Genesee Flats," in Mount Morris, N. Y., where they raise largely of broom and Indian corn. Last year, they had at the Mount Morris farm 300 acres in broom corn and 175 in Indian corn. In 1858, they had 75 acres in corn which yielded 65 bushels per acre. They can raise and freight this corn to New-Hampshire, at a cheaper rate than they can grow or purchase it there. So of the broom corn. They also have eight acres of intervale land on the west bank of the Merrimac river, at Concord. This is mostly used in the production of medicinal roots, herbs, &c., of which their sales amount to over $3,000 annually.

With the supply of labor always at command, their farming operations are performed at the right time and in the best manner I was at their place a few years since, (before the introduction of mowing machines and hay caps,) just as they had finished their haying. They estimated their hay that year at 150 tons, every clip of which was cut with the scythe, and every load of it stored in the barn in less than three weeks. and not a load of it was injured by rain.

With the mechanical skill and ingenuity possessed by some of the brethren, and the ample pecuniary means at their command, they seem to lack nothing that will serve to lessen the labor and toil of human muscle and nerve. They have invented and patented, (Jan., 1858,) unquestionably the best and most efficient washing machine for large establishments, that has ever been put to a practical test. Though but recently brought into public notice, they are extensively used in great numbers of our hospitals, asylums, and largest class hotels, and they give the utmost satisfaction, as the "statements and commendations" of numerous letters and certificates from many of the most prominent hotel keepers and others, fully testify. They are not designed for common family use, but for that of large establishments, being propelled by steam power. They have already disposed of over eight thousand dollars worth—being in use in various cities, from the Insane Asylum in New-Hampshire to Willard's Hotel in Washington, D. C., and from the Revere House in Boston to the Tremont in Chicago.

I attended one of their evening meetings. Of the religious belief and mode of worship, and domestic arrangements of these professing christians, it comes not within my province to judge them. In pursuing the course they do in these matters, they but exercise their constitutional rights, and worship God according to the dictates of conscience, and no one has the right in an authoritative manner, to say unto them "why do ye so."

There are many other interesting and useful facts connected with the labors and practices of these industrious, charitable and peaceable citizens, that are well worthy of being "put in print." But the length of this precludes any farther remarks respecting them at this time, for I wish to say something in regard to the agricultural prospects of the territory through which I travelled, going by one route and returning by another—corn, potatoes and beans, generally, appearing unusually well for this early season of the year—so of the growing oats. I saw a large number of fields of winter wheat, all of which was looking most promising, though some pieces were injured to some extent by winter-kill. The midge recently made its appearance, but most of the winter wheat has "got the start of the insect." Many fields of spring sown wheat are just heading out, and such probably will suffer badly by the ravages of the insect. In the aggregate I saw a large amount of winter rye, which is extensively grown on the light sandy soils bordering the Contoocook, Blackwater and Warner rivers, tributaries of the Merrimac. These several streams pass into the Merrimac a few miles north of Concord. Apples, pears, plums and other fruits now promise an abundant crop. Insects appear to be much less numerous than for several years past, especially the early caterpillar and curculio.

I saw numerous fields of fine clover in full bloom, much of it ready for the scythe—nearly or quite all of which appeared to be the medium or western variety, which comes forward too early for "timothy and red-top grass." Would it not be well for our farmers to sow at least a part of their grounds with the large northern variety. On good land it yields a very much larger crop, and coming into blossom later, it is fit to cut at the same time of cutting timothy and red-top. If mown at the "right time," and properly made and housed, cattle, sheep and horses will eat it as readily and clean as they will the smaller varieties. From its longer and larger root and top, it is far preferable for plowing in for green manuring to the southern or western varieties.

A large portion of the old mowing fields will yield but a very light clip of grass this year—perhaps there will be a falling off of the hay crop in this section of 25 per cent., compared with that of the past three years.

A few more words about barns. The farmers in this region of country, within a very few years past, have a real mania for building number-one barns. In my jaunt I saw scores of them—built within the past five years. They are generally from 80 to 100 feet in length, by 40 or more feet in width, all of which have cellars the size of the barn. They are "finished off" in the most thorough manner. Some are battened; others have the sides and ends shingled; others are clapboarded. All well supplied with light from glass windows, and painted. Many of them have tastefully finished ventilators upon the top of the roof or ridge.

By the way, when describing the Shaker barn, I forgot to notice the three large ventilators (with their Venetian blinds) upon the large barn, which carry the warm foul air from the hovels, &c., to the roof. There are also six or eight large wooden boxes or pipes from the cellar through the roof, for conveying the heated foul air of the cellar above the roof.

Warm, comfortable hovels for cattle are all very well, but for their most perfect health and thrift, fresh, pure air is also quite as necessary. Therefore, in the construction of cattle barns and stables, provision should be made for suitable and adequate ventilation. It is a sanitory measure that should not be overlooked, more especially in these times of *Pleuro-Pneumonia*. L. Bartlett.

Warner, N. H., June 30, 1860.

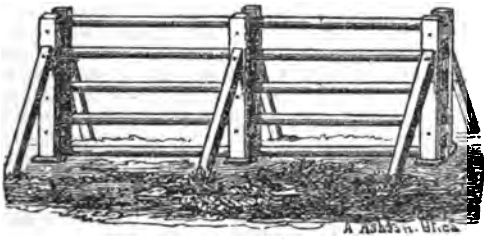
[For the Cultivator and Country Gentleman.]

HORT. EXHIBITION AT SKANEATELES.

Saturday, 23d of June, the Farmers' Club of Skaneateles held their first exhibition of fruits and vegetables. The show was good; finer fruit ought not to be desired, and we think the lover of rhubarb should feel satisfied. The leaf of one measured 3 feet 7¼ inches in diameter, the leaf stalk over 2 inches diameter and 2 feet 2 inches long. The strawberries were beautiful. Fifty-three entries were made, sixteen of which were for strawberries. The Wilson's Albany Seedling bore the bell, but I consider McAvoy of much finer flavor. The bouquets were beautiful. Miss E. Snook presented 21 varieties of Pansies, mostly seedlings; they were superb. The flowers as a whole were good and well arranged. On Saturday, the 14th inst., we have our second show. Your presence would add to the interest felt here, and with your own eyes you would be able to judge if we are what we consider ourselves to be, promoters of improvement. Aye, and it would enable you to see that some things are attained here in the growing of live fences, as well as in England and elsewhere S. M. Brown, at the close of the exhibition, made a few appropriate remarks. W. M. Beauchamp.

NASH'S IMPROVED FARM FENCE.

The accompanying illustration represents a section of straight fence, recently invented by E. Nash, Auburn, N. Y. It may be built of rails or of boards. The upright pieces are made of boards about four feet long and six inches wide. The ends of the rails are flattened to a uniform thickness, and two battens or uprights are nailed to each panel, when they are set on flat stones, as represented in the illustration, and braced with a brace on each side, which are set firmly in the ground with a pick or spade, and the upper ends beveled off and nailed or bolted to the uprights. Two small stakes may be driven on each side of the bottom rail to keep it from being moved sideways. It may be erected on rolling land or up and down slopes, as well as on level ground. It may be used for hurdles, or for fencing stacks, or for making pens for stock. The only portion liable to rapid decay is the ends of the braces. The foot of the braces need not be more than twenty inches from the blocks.



The *cost* of such fence per lineal rod will depend on the value of the materials used, in the locality where it is erected, which any one can compute.

When it is made of boards, the panels may be made in the workshop in the winter or at any time.

It makes a very *permanent* fence when the braces are firmly set; and the frost of winter will not affect it more than an ordinary rail fence. It has been well tested during the past season, and I have applied the principle to some of my board fence; and I do not hesitate to pronounce it the most *permanent surface* fence that I have ever met with. S. Edwards Todd.

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[For the Country Gentleman and Cultivator.]

WINTER BARLEY.

Some years ago it was thought that the coldness of the winter in Western New-York would prove a bar against the successful cultivation of winter barley. The same idea was also held in England, although the winter there is comparatively mild.

But this theory has proved to be erroneous, and winter barley is now extensively grown in England, in some counties it having become almost as frequently grown as winter wheat. It has also been found that barley raised from seed grown in the south of England succeeds better in the Northern counties than that grown from seed matured in the colder temperature of the north. It ripens earlier and gives a more certain crop.

It having been demonstrated that barley can be successfully grown in Great Britain as a winter or autumn sown crop, it would be well for us to endeavor to do the same for it here.

I have no doubt but that it would succeed well anywhere in the United States south of the 42d degree of north latitude. North of this it would perhaps be too hazardous a crop, although it has been successfully grown in Canada, especially in the peninsula lying between lakes Ontario and Huron, and along the northern shores of lake Ontario. I saw some winter barley in full ear early in June, which had been grown near Ottawa, C. W. Most of that which I observed is already being harvested, one field near this city being cut and ready to go into the barn on the 7th of July.

Winter barley has been cultivated for some few years at the west, especially in Indiana and Ohio, and in the Chicago market reports will be found quoted six to ten cents per bushel higher than spring barley. In New-York it has as yet been but little cultivated, but wherever it has been tried it has proved a successful and remunerative crop when properly attended to, and its culture is extending.

The advantages of growing winter over spring barley are: 1st. The farmer has more time to prepare his land get it into good tilth in autumn than spring, when a multiplicity of work comes on him at once.

2d. He is less dependent on the weather, which is generally such in autumn as will allow of almost any soil being worked to better advantage than in spring.

3d. Less seed is required, as it will tiller out very considerably, especially when sown early.

4th. It blossoms and ripens earlier even than winter wheat, and will thus more easily escape the ravages of the wheat midge, which has recently shown a disposition to attack and commit extensive havoc in spring barley.

5th. It is preferred by the brewers, who will give from 10 to 15 per cent more for it.

The ground intended for winter barley requires much the same preparation as for wheat, and it will amply repay any extra care bestowed upon it. Dry loams are most suitable for it, and the land should be ridged so as to carry off all surface water. The surface soil is better to be made loose and friable, as the roots are short and spread out near the surface, and it is found desirable to encourage as much growth of root as possible before the soil freezes up. The main point is to have the soil rich, well drained, and thoroughly pulverized. The time for sowing the seed is the last of September or first week in October, if sown earlier it is apt to get too heavy a top, and become smothered in winter, should the snow be heavy and lie long. Two bushels per acre is little enough to sow. If drilled in early, less might do; and everything having been properly attended to, forty to sixty bushels per acre may reasonably be expected as a return for the labor and trouble bestowed on this crop.

Hamilton, C. W. John Mackelcan, Jr.

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TURNIPS SOWN AMONG CORN.

In some recent notes from Dutchess Co., we alluded to the practice now becoming quite prevalent there, of putting turnips in between the rows of corn. A Berks Co., (Pa.) correspondent of the Germantown Telegraph says:

> The practice of sowing turnips among Indian corn, at the the last hoeing, and especially where the latter has been thinned by worms or other insects, is one which cannot be too urgently recommended. The turnip is a vegetable which requires less assistance from solar light during the incipient stages of its development, than almost any plant in the whole catalogue of edibles; consequently, it is but slightly injured by the foliage of the corn plants, or the closeness of the atmosphere thus created. After the corn crop is harvested, and before the advent of frost, there will be ample time for them to root, especially if the soil be well cultivated. Burnt lands, in which the natural vegetative powers of the soil are augmented by the alkaline principles of the ashes, are very favorable to the cultivation of turnips; and when they are sowed among corn on such, they almost invariably produce a lucrative crop. Hundreds of bushels of excellent turnips may frequently be grown in this way without any appreciable diminution of the corn crop. "Economy is wealth," says the adage, and it is certain no one can practice it long without increasing to some extent his means for future operations and enterprises. In this business of producing cheap crops in substitution for the more expensive cereals, we gain several important advantages, among which may be mentioned as not the least prominent, the saving of time, and the realization of a lucrative yield of produce from land prepared for another species of roots or grain. The ravages of insects often prove fatal to many vegetables—especially to Indian corn; and when this happens, unless the vacated land can be filled with some crop of later growth, it must remain, either in part or wholly idle.
>
> Again, the turnip bears late sowing so well that it may be grown on fields from which early vegetables have been taken; it succeeds well after a crop of peas, beans, &c.
>
> Bone manure, wood ashes, lime and poudrette are all excellent articles to be used in the cultivation of turnips. Ground and crushed bones, and bones dissolved in sulphuric acid—itself possessing powerful stimulant and manurial pro-

perties, makes an admirable dressing. Gypsum also, is applied with success, both before and after planting. Green and fermented manures should never be used on this crop.

THE TORNADO IN IOWA.

There are many very curious circumstances connected with that wind. A friend of mine has visited its track, and has given me these facts.

It has generally been said to have been about one quarter of a mile wide. It did not vary ten rods from three-quarters of a mile, neither did it vary much in width for many miles. Precisely in the center, a space of about 100 feet, the effect was much more severe than the rest of the space; and in this center all the trees and timber lay north and south, while at the south side the things were carried east, and at the north side west; and yet there was much loose materials fell hilter skilter on the top of the first prostration. This rotary motion then, of course, was from west to east on the south side, and from east to west on the north side.

The crops are not destroyed along the track of the tornado. It was the 3d of June; wheat was not jointed, and although it was swept off, leaving only the root in the ground, it came up again, and now stands at the edge of the track about eight inches lower than that outside, and green and late, supposed to harvest over half as much as the very heavy crops in that region. Corn also came up and looks quite well.

Along this track were strewn fragments of household furniture, clothing, family utensils, buildings, fences, timber, and carcasses of all kinds of animals; and most of all these things were besmeared with mud and dirt, for the wind took up quite a quantity of dust and dirt, which was well moistened in the clouds, and thoroughly stirred into mud. SUEL FOSTER. *Muscatine, Iowa.*

[For the Country Gentleman and Cultivator.]

IMPROVING TOO LARGE A FARM.

MESSRS. EDITORS—In the days of my boyhood, about fifty years ago, I was acquainted with three good farmers of olden times, each owning about 130 acres adjoining on the same road, lying along about a mile. The land being then comparatively new and productive, each of these men became independent and reared a large family, and sent them into the world well to live. About fifteen years ago, a young man of my acquaintance bought one of these farms, and moved into an old house that had stood there more than 60 years. But he found the farm so unproductive that he could not live upon it. So he bought the second farm, but he could live no better, and finally he bought the third, making him about 500 acres of *very good* and yet very *unproductive* land. Now he is just beginning to learn that the more he has of such land, the worse he is off. But what ails the land? It was naturally productive, and being porous when new it was not too wet, nor was it too stony even. But from long use and age it has become very compact, and is now wet and cold, and of course *unproductive.*

His whole farm, both meadow and pasture land, is being overrun with every variety of foul stuff. His whole farm lies facing to the west. Nearly every acre of the farm must be underdrained before it can be made productive. But the owner can never do that. First, for the want of a disposition to do it; and secondly, for want of means. His whole capital is invested in unproductive land. If he would sell 300 acres of his land, and with the means prepare 200 acres to live on, he could make money, become independent, live like a freeman, and, what is most important of all, he could *educate* his *children right.*

But what I am coming to is the influence such a course of farming and of life has upon his children in giving an early direction to their future life. He is rearing a young family of boys and girls. But his boys will never become farmers, nor will his daughters ever *marry* farmers. They will live old maids first. There is not a single thing connected with the life of that growing family calculated to make them happy upon the farm. There is nothing before them but a life of slavery, with no present pleasures to alleviate. The old house stands close to the road, with not one foot to adorn with shrubbery or flowers, and if there were, they have no time to improve it, for from morning until noon, and from noon until night, all is *labor, labor, labor.*

Now when those boys shall have grown up and begin to inquire for some plan to escape the slavery to which such a system of labor has doomed them, 'Columella' will say they have an *aversion* to labor, an aversion produced by *high mental culture.* Now the same advice that I gave to that man I would give to all in like circumstances. Sell at least 300 acres of your land, and then fit the other 200 acres to live on. Select 10 acres and underdrain it to begin with. Then, after applying to it all the manure of a single year, with the plow, the cultivator and the harrow, prepare it for laying down to grass. Then, the next year, another ten acres, and so on for ten years. At the end of ten years, or fifteen at the most, his whole farm would produce more than 1000 acres would in the present condition of his land. Under such examples and influences, his boys would become *farmers* and his girls *farmers' wives.*

Waverly, N. Y. J. L. EDGERTON.

[For the Country Gentleman and Cultivator,]

GINGER BEER.

I will give you my way of making small beer that is the right kind of beer, in answer to an inquiry by A Subscriber.

Take 8 gallons of warm water and 1 gallon of New-Orleans molasses, and a small handful of hops, and boil them in a gallon and a half of water, and strain it in with the other warm water. Then take two large tablespoonfuls of good ginger and put it in and mix it right well, and then put in two tablespoonfuls of good cream tartar. Next put in 1¼ gallons of good yeast, and mix it all well, and let it stand for six or eight hours, or rather till it has worked a good scum over the top. Take a clean cloth and wash it in warm water, and wring the water out and lay it in a culender and strain carefully; bottle and cork and tie up so that the strings will make a cross on the top of the cork. Set the bottles out in the hot sun for two hours, and then put them in a good cold cellar or spring house and let it get one day old, and then you will have good beer.

Skim before you strain; also, before you put the ginger and molasses, and the cream tartar and yeast in your water, make it a little cool, a little more than milk warm, but no warmer or else it will kill your ingredients. G. GEBHART. *Indiana.*

* * *

APPLES FOR PORK MAKING.—A pithy writer in the Genesee Farmer remarks on this subject as follows: "For swine, nothing equals an *apple-pie*, either for relish or for fattening power. The pig is not very dainty about his pie, however. If you merely cook the apples and stir in a little *bran*, he won't refuse the dish; substitute shorts, or corn and cob-meal, or ground oats or buckwheat, and it will suit his palate and pile on the fat amazingly. And for *finishing* up a piece of pork, an apple pudding thickened with good corn meal, is as far ahead of hard corn as the corn is of raw pumpkins. Pork made with apple is sweeter, and quite as free from *shrinking* as the cornsfed

WHITEWOOD HONEY.—The Ohio Farmer remarks that the Whitewood or Tulip trees are covered unusually with blossoms this season, and adds what had never attracted our notice, that the bees gather a rich harvest of honey from this source, leaving while they last almost untouched the flowers of the white clover. It is a splendid tree, not only when in bloom, but through the entire summer season.

COOKED FOOD FOR HOGS.—An experiment related in the Working Farmer resulted as follows:—"Mr. Mason of Somerville, N. J., found that by using cooked corn meal, from the middle of April to the first of December, he increased the weight of two pigs from about 40 to 602 lbs., being a gain of one and quarter pounds per day, and that the entire cost of the pork was about four cents per pound."

FOR TAKING OUT IRON RUST AND YELLOW STAINS.—Dip the articles in a strong solution of Tartaric Acid, and lay them exposed to the sun.—*Exchange.*

Cutting Back Trees when Transplanted.

This practice, now generally adopted by the most successful cultivators, and founded partly on the principle that mutilated and greatly reduced roots cannot supply a full amount of nourishment to a great multitude of buds, is objected to by some of our correspondents. Having adopted the practice for twenty years, and had many opportunities of comparing the results of cutting back with those of planting the tree with the top entire, we have felt no hesitation in recommending it for general adoption—the only exceptions perhaps being those trees which have acquired some age, or have become enfeebled or stunted in growth before removal. In such instances a severe cutting back may not possibly always be advisable. It is better, however, to set out none but young and vigorous trees.

Much may be said by way of theorizing, but we prefer testing this question simply by experiment; and where this mode of reaching truth has been fully adopted, in connection with good trees and good culture, we have never known a cultivator who has not been convinced of the decided advantages of the practice. Having made a few experiments in this way the present year, in order to exhibit the results, we shall now merely state what these results are up to the present time.

Four two-year cherry trees, each about six feet high, were set out, three with entire tops, and one with two-thirds of each one year shoot cut off. The three unpruned trees have expanded their leaves, but none have made a new shoot half an inch long. The pruned tree is covered with vigorous shoots about two inches long, now growing rapidly. The contrast will no doubt be much greater in a few weeks more.

Three Mahaleb trees, of three years' growth, and about six feet high, were set out. On two of them the shoots were mostly left untouched. These are scantily furnished with small leaves, and none have grown half an inch, except where one of them had four shoots cut back; these four shoots have each several new shoots from one to two inches long. The third Mahaleb had each last year's growth cut back two-thirds; it is now covered with young growing shoots about one inch or more in length.

Of six Breda apricot trees, two years from the bud, and about seven feet high, five were cut back, and one left untouched. In order to avoid vague estimate or guess work, we measured and counted the shoots they have each made up to the present time. On the five cut trees the following are the results:—

1 tree has 18 new shoots, from 6 to 18 inches long.
1 " 10 " " 6 to 9 "
1 " 9 " " 6 to 7 "
1 " 18 " " 6 to 18 "
1 " 21 " " 6 to 21 "

besides which all have many other shoots from three to six inches.

The remaining tree, left uncut, has seven shoots one to two inches long, none are over two inches. The amount of foliage it contains is certainly not over one-twentieth part that on either of the five pruned trees; *hence the intention which some have of obtaining more foliage by leaving the trees unpruned, results in failure and defeats its own end.*

The worst part of the unfavorable result on the unpruned trees has not yet come, for the trees having once become thoroughly stunted, will require years to restore them.

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☞ The Rensselaer Co. Ag. Society has commenced the publication of a monthly "Journal."

[For the Country Gentleman and Cultivator.]

CROPS ON DRAINED LAND.

Messrs Editors—I have not seen any statement of crops grown on lands that the New-York State Ag. Society awarded their premium on draining for the year 1858, and to let the people know how I have succeeded, will write you a short account of the same.

About 12 acres, as shown by diagram on page 230 of that Society's Transactions for 1858, was plowed and planted to corn about the 16th of May. The same was hoed from 6th to 11th of June, looking finely. On 12th of June in the morning, the frost had cut all clean—beyond any hope of recovery. That day being the Sabbath, and Monday a rainy day, we commenced plowing again the 14th, continuing the 15th and 16th. The result, with the coldest season I ever knew, was the largest growth of corn ever seen in these parts, not fully ripened of course. The corn was acknowledged by all to grow the fastest that they ever saw, and the mystery was what made it grow so; as the year before, all said it was folly to try to drain that piece, and much more so to try to raise corn there.

I harvested 100 bushels ears per acre, which I know is not a heavy crop, yet considering the frost and the season think it highly remunerative, as the fodder was enormous, and as hay was scarce, was valuable. I did not weigh but a part of the dried fodder, but think it safe to say five tons per acre, which would have sold for $7 per ton, which would be $35 for fodder, and the corn 50 bushels at 80 cents, would be $40 more, making a sum total of $75 per acre for the produce. The labor was nearly double, as all was planted twice and hoed three times. This year the same piece is sown to oats, and promises an abundant crop. A neighbor said to me yesterday, the crops on that field was a better argument than all the talking I or any other man could do for a month together.

Tell the people to *drain*—to *drain well*, not less than three feet deep, with wood, stone, or tile, as each advocate, but be sure *to do it*, for it will pay *if well done*. More anon. Jonathan Talcott. *Rome, June* 27, 1860.

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Preserving Green Corn for Winter Use.

Messrs. Editors—I give you a recipe for preserving green corn for winter.

Cut the corn off the cob, and put it in a stone jar, with a handful salt to a pint of corn. When the jar is full, put a weight on it. When you wish to use it, remove a little of the top, and wash and soak over night. G. K.

Waynesborough, Va.

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Red Ants—How to Get Rid of Them.

Messrs. Editors—Please tell "A Distressed Housekeeper," that she can get rid of her ants by placing camphor about the shelves where they are found. A neighbor of mine, in whose word I can place the utmost confidence, says—take spirits of camphor and sop it on the shelf, making a perfect ring, and place the ants inside of the ring and none of them can get out alive—it is sure death. He has tried it. Those out of the ring *will leave in the first train*. Will "A Distressed Housekeeper" try this, and report in The Cultivator. Joseph E. Phelps. *Worcester, Mass.*

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RULES FOR PRUNING GRAPES.

The last number of Hovey's Magazine gives substantially the following general rules for grape pruning, after recommending grape-growers to be free in the use of the knife, followed by the remark that where one vine is pruned too severely, nine are not pruned enough:—

1st. No shoots should be nearer than one foot of each other.

2d. Prune back to within one eye of the old wood, every fall and spring, about one one-half of the annual shoots—the remaining eyes producing canes to be retained for bearing next year—when the old bearing wood is in turn to be cut out, to make room for new shoots.

3d. Disbud or rub off, as soon as they appear, all shoots not wanted as bearing wood.

Native Fruits and Errors of Opinion.

We never could perceive why a pear seed, containing within itself the germ of its future character, deposited in soil on one or the other side of the water, should come up and make a different tree on account of the place of its growth. For the same reason we cannot perceive why a native grown variety is necessarily better than one brought across the national line. It is true, that the *selected* native seedlings are as a general rule better than others, being selected *because* they are found best in the particular region of their origin.

As an example,—take 100 seeds of the Bartlett pear. Plant 50 in England and 50 in New-York. Out of the seedlings, one is selected in England as best, and one in New-York. The English seedling will not prove so good in America as the other, nor the New-York seedling so good in England, simply because each has been chosen for its *adaptation* to the respective locality. But there is no doubt that of the remaining plants, there are as many in England that would be good in New-York as those growing here; or as many of the New-York plants that would be good in England as those growing there—could their place of growth be changed and the choice made accordingly.

These remarks have been suggested by a remark in Hovey's Magazine, from an intelligent and eminent correspondent, that pear trees as hardy as our forest trees, "can be expected only from native seedlings." Time will prove much in relation to the hardiness of varieties,—and in the meantime we will only remark that western cultivators assure us that the hardiest pear tree they have tested is the Flemish Beauty; and fruit raisers in Maine assert that the Urbaniste is the hardiest there—both European sorts.

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[For the Country Gentleman and Cultivator.]

VALUABLE WASH FOR BUILDINGS.

I saw an inquiry in one of The Cultivators, a short time since, for a good whitewash, that would not wash off. I send you the following. More than three years ago I whitewashed my barn and outbuildings with it, and they look nearly as well as when put on. The recipe was originally taken from the National Intelligencer.

Take half a bushel of rock lime; slack it with boiling water; cover it during the process to keep in the steam. Strain the liquid through a fine sieve, and add to it a peck of salt, previously well dissolved in warm water; three pounds of ground rice, boiled to a thin paste and stirred in boiling hot; half a pound of powdered Spanish whiting, and a pound of clean glue, which has been previously dissolved by soaking it well and then hanging it over a slow fire, in a small kettle within a large one filled with water. Add five gallons of hot water to the mixture, stir it well, and let it stand a few days, covered from the dirt.

It should be put on right hot. For this purpose it can be kept in a kettle on a portable furnace. About a pint of this mixture will cover a square yard on the outside of a house, if properly applied. It answers as well as oil-paint for wood, brick or stone, and is cheaper. It retains its brilliancy for many years. There is nothing that will compare with it, either for inside or outside walls.

Coloring matter may be put in, and made of any shade you like. Spanish brown stirred in will make red pink, more or less deep according to the quantity. Yellow ochre stirred in makes yellow-wash, but chrome goes further and makes a color generally esteemed prettier. In all these cases the darkness of the shades of course is determined by the quantity of coloring used.

When walls have been badly smoked, and you wish to have them a clear white, it is well to squeeze indigo plentifully through a bag into the water you use, before it is stirred in the whole mixture. If a larger quantity than five gallons be wanted, the same proportion should be observed. E. F. Aiken. *Grove Ranch, Cal.*

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[For the Country Gentleman and Cultivator.]

A NOTE FROM VIRGINIA.

A two weeks' visit among the farmers in Fauquier, enables me to say that the season there is generally a fruitful one. Wheat will be quite an average crop; some planters, however, have nearly lost that crop by the cut-worm. I know of one instance where three hundred bushels of wheat sown will not return one hundred. Yet the average crop of the county is good and superior in quality. An intelligent farmer told me that he had examined the insect which was troubling his wheat, and thought our Hessian fly had got among it for the first time in his experience.

I introduced spring wheat there this season, and when I left it looked very promising; it has not been tried in that section for years, and if it should turn out as there is reason to anticipate, it will prove a great benefit, as it comes in *after* the cut worm has done its work.

Corn, oats, clover, rye, &c., never looked better. Tobacco paid so poorly last year that many planters have declined trying it this season; it is a crop requiring more labor than any other, yet there is some compensation in the fact, that contrary to the received opinion north, it makes a good preparation for wheat the succeeding year.

The mountain lands of Madison, which have been sold for almost nothing, are giving large crops of potatoes and grass, and if Northern seed corn was introduced there, would make a crop. Sheep are being extensively introduced there.

Can you tell me why it is that onions (which would be a valuable crop there,) cannot be raised from the seed, and that what they term "clove onions" are always used to produce them? I have supposed that the introduction of new seed might answer, instead of their "rare ripe" plan, but I am not a practical farmer. E.

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Ayrshire Prize Milkers.—It will be remembered that we noticed some weeks since, the Duke of Atholl's tender of certain Prizes for Milking Cows, to be awarded by the Ayrshire Agricultural Society. The trial formed a novel feature; eight cows competed, and they were kept together for five days, and carefully watched and milked. The following is a statement of the quantities of milk given by the cows belonging to the winning competitors:

	Greatest Milkings.	Average of ten milkings.	Per Centage of Cream.
1.	28 lb. 7 oz.	26 lb. 5 oz.	12
2.	26 10	24 7	9
3.	24 13	22 10	11
4.	24 12	12 1	15

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☞ Mr. Jeremiah Niver of Stuyvesant, Columbia Co., is agent for Eddy's "Patent Protective Bee Hive." Mr. N.'s experience leads him to speak in high terms of the operation of this invention. He has written a little book on the subject, which we presume may be had by addressing him as above. Mr. Niver has also placed one of the Hives at this office, where it will remain some days on exhibition, and by way of sample of what it can accomplish, has left with us a box of new honey of first quality, weighing upwards of 10 lbs.

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Farming Hilly Land.—Such land is apt to wash into guillies in heavy rains, especially if poor and shallow; the best way to prevent it, says a Hill Country farmer, is to make the ground deep and rich, and sow on grass seed in the hollows most exposed. "Make a sufficient quantity of the soil mellow to absorb all the rain that falls, and none will run off, carrying the soil with it." Deep plowing, sub-soiling and underdraining, will best accomplish this end.

HAY AND GRAIN RACKS.

A correspondent in Indiana has requested directions for constructing a rack or frame for placing on an ordinary farm wagon, to draw hay and grain upon. There are many modes of construction, variously known and adopted in different localities, and possessing various advantages and defects. Among them we have selected two already well known to many of our readers, but doubtless new to others, and which, on the whole, are, perhaps, as good as any that are used.

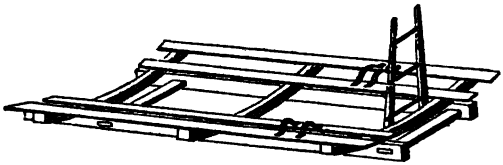

Fig 1.

Fig. 1 represents a strong frame, the only objection to which is its weight, and the consequent inconvenience of placing and removing it from the wagon. It consists, first, of a bottom frame, (forming the foundation or base,) just wide enough to fit within the stakes of the wagon, made of two side pieces 10 inches wide, two inches thick, and about 13 feet long; these are connected at the ends by cross pieces morticed through them. On this frame rest three curved cross timbers, about 4 inches square, and 6½ or 7 feet long—the curve may be about 6 inches, or enough for the boards that rest on them to clear the wheels—if the curve is less, the bottom frame must be wider. These timbers support two boards on each side, each board an inch thick and 6 inches wide, and about 13 feet long, or as long as the rack. Stiff, curved iron straps span from one board to the other over the forward wheels, to prevent the hay from resting on the tire. This frame or rack may be modified by making the bottom frame five or six inches wider, and using straight instead of curved cross timbers, but this will make it heavier, and the load will not rest so securely upon it.

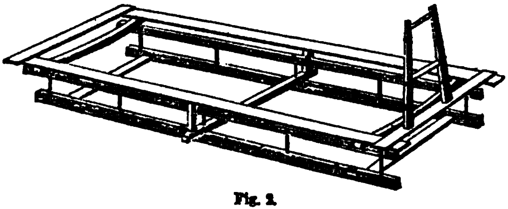

Fig. 2.

Fig. 2 exhibits a lighter and more perfect frame, but requiring more labor in construction. The eight upright pins or standards, connecting a light foundation frame with a lighter one above, renders the whole so manageable that it may be very easily placed upon or removed from the wagon. The cross timbers (consisting of only one at each end) need not be so much curved—a curvature of three inches is sufficient, and they will be large enough if 2½ by 4 inches; their length may be about 6½ feet, or if the rack is large, 7 feet. The bottom frame may be made of 3 by 5 inch stuff, 12 feet 6 inches long, and the top frame 2 by 8 stuff. An inch board a foot wide goes all around the top, the extreme length of which is about 14 feet. In both these racks the bottom frame must be just wide enough to fit within the upright stakes of the wagon, which is usually about 3 feet 2 or 3 inches. The short ladder placed at the forward end, to prevent the load from falling forward, and to fasten the reins to during the operation of loading, should be about four feet high.

Another form of construction is first to make a foundation frame of side pieces about 2 by 8 inches, connected together by four cross bars morticed into them, nearly as already described, the cross bars being of white oak or other hard wood, into which oblique mortises are cut on each side, within the side pieces. These oblique mortises receive sloping side frames, which complete the rack—the feet of the side frames being thrust into the oblique mortises, and the frame resting against the top of the foundation frame. This rack is not so substantial as the preceding, but as the side frames are taken out and put in separately, one person may more easily place the whole on the wagon.

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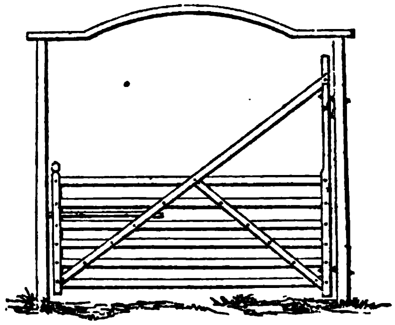


[For the Country Gentleman and Cultivator.]

A GOOD FARM GATE.

Editors. Co. Gentleman—Annexed you will find a plan of a gate that was erected on the farm I now own, by my father, more than 30 years ago, which gate is still in good working order, except that the post of the gate into which the rails are morticed, is beginning to decay, and will have to be renewed; otherwise the gate is firm and good, never having sunk or swayed an inch either way.

The plan of the gate is similar to one already described in Co. Gent., but is much more substantial, and very little more expensive. The posts and cross piece at the top are locust. The posts are 11 feet high above ground, are 5 inches square at the top and 6 inches square at the ground; the cross piece is 4 by 5, and curved as represented, to make it (I suppose) more ornamental. The posts are set in the ground about 3 feet, and firmly fastened with stone. The rails in gate are—top rail 5½ inches wide; 2d, 5½; 3d and 4th, 6, and 5th or lower rail, 7 inches; upper space 7½ inches; 2d, 7½; 3d, 5, and lower space 4 inches. The railings are morticed into the post of the gate, and secured by a wooden pin; said post being 3 by 5 inches, and made 4 by 3 above gate as represented in drawing. The braces and pieces at the end of gate are made of railing, the braces being 5 inches wide, and the pieces at end of gate 6 inches wide—there are two pieces, one on each side at end of gate,) and are well secured—both braces and end pieces—to the rails of the gate by *rivets*, not *nails*.

I should say that the railings of which the gate is constructed, are only one inch thick by the widths above given. The long brace being dove-tailed as represented, and secured, prevents it from drawing out or giving way. The bolt for fastening and the plan of hanging are very simple, and in fact the whole gate is so easily constructed that any man that can use a saw and chisel, and bore a hole, can make and put one up.

There being no patent on this gate, and hoping it may be worthy a place in the Co. Gent., and that it may be of advantage to some of your numerous readers, I send it to you. James M. Kinkead.

Albany Co. Ag. Society.—At a late meeting of the Managers of the Albany County Agricultural Society, it was resolved to hold the Seventh Annual Fair of the Society on the Washington Parade Ground on the 18th, 19th, 20th and 21st days of September next.

[For the Country Gentleman and Cultivator.]

BALLOON FRAMES—IVth Article.

It is gratifying to see so many favorable notices in your columns, endorsing the practicability, economy and general usefulness of the balloon frame, and with such practical suggestions and improvements as have been made by C. G. Taylor, of Rock Island, Ill., Suel Foster, of Muscatine, Iowa, and W. S. Hand, Milwaukee, Wis. Opinions from these gentlemen are opinions worth having, because they live in a section of country where the balloon frame is in the ascendancy, and they are also practically aware of all the merits and demerits of the old fashioned frame. We should like to have somebody take the other side of the question, and give some practical reasons why the balloon frame is not 40 per cent. cheaper, and not better adapted to the construction of wooden buildings than any other known style of frame. If the balloon frame has a weak spot, we should be glad to have it pointed out. As a matter of economy in architecture, it is worth the attention of all the building community; it will pay them to thoroughly investigate it; it will pay for the New-York State Agricultural Society, and for the Agricultural Societies of other States, to appoint a committee to examine and report its advantages, and its disadvantages if they can find any.

The balloon frame belongs to no one person; nobody claims it as an invention, and yet in the art of construction it is one of the most sensible improvements that has ever been made. It is safe to say that there is not a farm west of the great lakes but what can furnish an illustration of its success; the wooden buildings in Chicago, Milwaukee, Dubuque, St. Paul, San Francisco, and other cities of the west and far west, with scarcely a single exception, are built with balloon frames. The depots, freight houses, and other wooden buildings of the Illinois Central, Chicago and Galena, Milwaukee and Mississippi, and other western railroads are constructed in the same manner. We know of a block of five buildings in Chicago, used as stores, total dimensions of which are 125 feet front, by 100 feet deep, three stories high, that perfectly fulfils all requirements for storage and business, and has done so for years. A hotel at Sparta, Monroe Co., Wisconsin, above 40 feet square, has the studding spliced three times, and the upper room is used as a ball room, the most severe test that can be applied to it, and when dancing times are over, it is used as the "school section," a prominent feature in every western hotel. We have seen farm houses and town houses in Illinois, Wisconsin, Iowa and Minnesota, built with balloon frames, and nowise inferior in size, comfort, convenience, style and finish to the best examples in the State of New-York.

The only instance of a balloon frame having moved from its foundation, that has come to our knowledge during eight years practical experience in our profession at the west, was some years ago, at Oshkosh, Fond du Lac county, Wisconsin. A tornado, about 3 a. m., lifted and moved entire about 30 or 40 feet, a balloon house, and doing no further damage than waking up the family; at the same time an old fashioned frame in the immediate vicinity was uttterly demolished. There is the same difference between a balloon frame and the mortice and tenon timber frame, that there is between a bushel basket and a dry goods box; drop them from a house top, and you can soon find out which will stand the most hard knocks. The name of "Basket Frame" would convey a better impression, but the name "Balloon" has long ago outlived the derision which suggested it.

The union of concrete with a wooden frame, strikes us very favorably; if a suggestion would be in order, we would use the balloon frame for this purpose. The studding we would rip from the floor plank, 1¼ inches thick, and place them three or four feet apart. It has been demonstrated that a concrete building is sufficiently strong without any frame, but the introduction of a frame obviates all other objections that we know of to concrete alone. The balloon frame with concrete, admits of ties in every direction, makes the whole wall stiffer and stronger, and gives the floor joists a better bearing; a universal brace to a piece of timber, makes a great difference in its strength, and changes its capacity from hundred weights to tons. A perfect familiarity with every known form of economy in the erection of buildings, warrants us in stating that we believe a union of concrete and the balloon frame to be within the line of the most rigid economy yet found in any other manner of building, and that a building put up in this manner would be cheaper, (inside finish excepted,) than the frame of a house constructed in the old style.

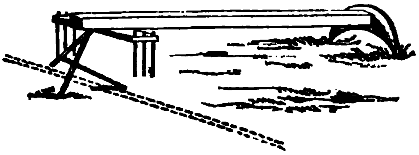
Any person contemplating the erection of a wooden building, would save money by investing fifty dollars in travelling expenses, to examine a balloon frame; a barn 20 by 40 has just been completed at Irvington, N. Y., for Joseph W. Hartley, Esq., and a number in the vicinity of Newark, N. J., both dwellings and barns. One gentleman informed me that he had put up a building some years ago, after reading an article on the subject by Solon Robinson; so well is he pleased with it, that he has built another in the same manner, and he estimates that he has saved between two and three hundred dollars by adopting the balloon frame.

In a future article we will illustrate the application of this frame to the largest class of barns.

GEO. E. WOODWARD,
Architect, Civil and Landscape Engineer, 29 Broadway, N. Y.

MOLE TRAP.

Having seen an inquiry some time since in the Co. GENT., about mole traps, I send you a description of one which we use in our market garden. It is cheap, efficient and durable. Any farmer can make it himself.



It consists of six teeth, nine inches long, made of ¼ inch wire, well sharpened at the points. These teeth are set into an inch plank, 9 inches long, and 3¼ inches wide—three teeth being set at each end. Nail this piece of plank containing the teeth to a 4 inch scantling, about 18 or 20 inches from the end. The scantling should be about 6 foot long.

On the opposite end of the scantling nail a board hollowed out on one edge, and rounded off on the other, with the convex side up. This is to hold the trap firmly to its place, and should be pressed into the ground when set.

Now make a set of common dead fall triggers, and your trap is complete.

Set your trap with the teeth immediately over the mole track. In the center, between the teeth, press down the track, and let the point of the long trigger rest on this pressed portion of the track. The mole throws the trap by rooting up the hard earth under the point of the long trigger. Having three teeth on each side, he is sure to be caught, coming either way. [The dotted lines in the figure show the position of the mole track.] M. D. BOWMAN.

[For the Country Gentleman and Cultivator].

Flax-Seed, Linseed Oil, and Oil Cake.

Messrs. Editors—Your editorial "Notes from the Connecticut Valley," in Co. Gent. of June 21st, were exceedingly *interesting*, in consequence of having heard much of that section of country from neighbors who had formerly resided there, and also very *instructive*, as the farmers of Franklin county seem to be first-rate managers, and, as a natural consequence, prosperous and progressively improving Country Gentlemen. Success to them; and may their industry and ingenuity be extensively imitated by their brother farmers in other States!

Your "note" as to the composition of the feeding stuff used by Mr. Isaac Barton for his growing stock, and your subsequent remark connected therewith, as to the comparative value of flax-seed and oil cake, called to my remembrance some items of information as to these feeding materials and as to the use of linseed oil, which I intended to communicate to you and your readers some time ago. Though prevented while the information was yet fresh in my mind, the delay may yet prove rather an advantage than otherwise, as the statement and the remarks you have made in reference to Mr. Barton's employment of flax-seed will undoubtedly have awakened attention, and excited to inquiry in regard to the comparative advantages of the various modes of using flax-seed and its products—the oil and the cake.

A few weeks ago, then, I was informed by a gentleman who had been looking at the stock of some of the more celebrated breeders of cattle in Ohio, that he learned from two of those whose stock he had inspected that they had discontinued almost entirely the use of oil cake, and had substituted in place of it a mixture of ground grain with an addition thereto of a certain amount of linseed oil. Whether this change had been made in consequence of finding some, more or less, of the oil cake in market adulterated or of inferior quality, or with a view merely to economy, the price of oil being comparatively low, my informant had not inquired. But from whatever cause these breeders had been led to make the change from oil cake to a mixture of linseed oil with the meal of Indian corn and other grain, they stated, as the result of their experience, that the change was entirely satisfactory to them, and that they were sure that they could thus supply, for their cattle's use, as much oily and other nutritive matter as the *very best* cake ever contained, at a less cost than by purchasing the cake, while at the same time they escaped all risk of an inferior or fraudulent article, and could thus secure a choice as to what kind of grain or other feeding stuffs they should combine with the oil. At first, they said, cattle do not relish or take hold of the mixture of meal and oil, but after a few days coaxing and fixing of the mess in various ways, they seem to relish the mixture just as well as oil cake itself.

In England and Scotland, also, experiments have been tried in feeding linseed oil and linseed itself, the former being poured upon and mixed with chaff, bran and other mill feed, and the latter mixed and ground with grain, as is done by Mr. Barton, or mixed with chaffed straw or other bulky food so as to secure thorough mastication. Sheep, as well as neat stock, have been fed with the oil in the manner just named, and the experiment is reported to have succeeded quite satisfactorily, in one instance so much so as to lead to a decided preference to the use of the oil in this way to that of oil cake in the usual way.

Taking it for granted, then, that linseed oil mixed with ground grain, as in the case of the Ohio breeders, or with bran, mill feed and cut straw, as in the experiments made in Great Britain, can be economically and successfully used in the place of oil cake, it seems highly probable that the use of the seed itself, either ground with other grain, as Mr. Barton uses it, or crushed, or boiled, or added to other feed, as in the case mentioned in Co. Gent., April 21, 1859, would be found on trial a still better mode of availing oneself of the oily and other nutritive elements of this not yet duly appreciated feeding stuff. The use of the feed itself, rather than either the oil or the cake would secure the following and perhaps other advantages: Saving the expense of extracting the oil; guaranteeing the absence of all adulteration; making a more palatable mess than any fixed with oil, and greater economy. A. R. A.

SORE TEATS IN COWS.

To cure a wound in the teat of a cow, I would, if the opening is not very large and the discharge of milk from it abundant, take the following course: Keep the cow in the barn and the milk in the bag reduced by frequent milkings. Cauterise the edges and inside of the opening with a hot iron; then let the burn heal by granulation, (as of course it would do,) the contraction consequent upon healing by granulation will probably close the artificial opening. A. *Buffalo, N. Y.*

DIRECTIONS FOR MILKING

"L. T." says in the Ohio Cultivator, "That there are many good milkers who cannot tell others how the thing should be done." He evidently does not lack in the *telling* part, for we never saw better practical directions to milkers than his, which we copy below:

> "Brush the udder and flank, handle the teats a little, and start the milk. Set the bucket a little forward and outward, the side towards the milker a little raised. Grasp the near front and off hind teat, or alternately, as near the end as possible, without milking on the hand, keeping the left arm in a position to protect the pail, if necessary. Place the first forefinger directly in the center of, not around the teat, and close the other fingers *successively* down upon the center. Avoid conversation, milk as rapidly as possible, and quit when done. Never milk only one teat at once, or use only the thumb and finger, unless unavoidable. If desired to save the strippings, wait ten or fifteen minutes, then take what has collected."

WHEN TO SKIM MILK.

A dairy-woman, in Western New-York, speaks in this emphatic tone as to the best time: She says that the right time to skim milk is "*just as the milk begins to sour in the bottom of the pans*. Then the cream is *all* at the surface, and should at once be removed—with as *little* of the milk as possible. If allowed to remain until the *acid* reaches the cream or to become *thick*, it diminishes the cream, and impairs it in quality. That housewife or dairymaid who thinks to obtain a greater quantity by allowing the milk to stand beyond that time, labors under a most egregious mistake. Any one who doubts this, has only to *try it* to prove the truth of this assertion. Milk should be looked to at least *three* times a day."

STRIPED BUGS.

The striped bugs—oh the rascals! The Co. Gent. of the 7th June, p. 367, copies from the N. E. Farmer, a remedy for these fellows—"turpentine, cotton batting and a split stick." I tried it without any success. Water would have been just as effectual. The next remedy that came to hand was "hen dung," pulverized and scattered on the hill around the vines. Now I have watered mine twice a week with liquid manure made of hen dung, as strong as it could be made, by putting it around the hill, but not directly on the vines. This I have done for the purpose of making them grow, which it has done, but has had no effect upon the *bugs*. I also tried kerosene in the same way the turpentine was to be used, with the same results—they seem to delight in perfumery, (for I take it, it is the odor that is to do the work of expulsion;) it may be, however, that our bugs are different from other people's bugs—their nasal organs may be depraved. One other thing we tried—it was pinching them back as they say of grape vines—this proved the most effectual of anything. The number that were destroyed in this way is astonishing. While upon bugs allow me to say, that I like the philosophy of the Long Island farmers, as described in the Gent. of June 28, p. 418. This looks as though it might work, and although attended with some labor, it is better than to try to lead them off by the nose—they are a nuisance any way. J. L. R. *Jefferson County, N. Y.*

MANURING THE WHEAT CROP.

In an article with this heading given about a year ago, the Country Gentleman took occasion to urge upon its Central and Western New-York readers, who would again engage in wheat growing, the importance of especial applications of manure for that purpose. The lesson of another season's crop, studied with especial reference to this subject, induces us to recall the subject, that we may add some additional considerations in its favor, as well as indicate some very generally available resources of fertilizing material, especially on soils not otherwise so well adapted to this greatly prized and valuable cereal product.

Mr. Harris, in his Yale Lecture on "Wheat Growing in America," recently published in this journal, (Co. Gent., June 21-28, '60,) remarks that "in Western New-York manure is seldom applied directly to wheat; some say it is injurious." It was thought as stated in our former article, "to stimulate a heavy growth of straw at the expense of the grain, and by the rankness and succulency of the former, increasing the liability to lodge, and tending also to produce rust and mildew in the standing grain." This opinion is far less prevalent than formerly, and for two reasons: We have better learned the requirements of different soils as to manures, and the effect of different fertilizers on the wheat plant; and the early ripening varieties now sown are far less liable to be injuriously affected by manure than the later kinds formerly so popular. The present practice is fast conforming to the view expressed by Mr. H., "that on most farms the wheat would be very grateful for a little good, well-rotted manure, either plowed in or spread on the surface just before sowing."

"We are very likely," as stated a year ago, "to throw away our seed and labor, now-a-days, in sowing any but *rich*, warm, quick soils to wheat." We must get a large growth of healthy, early maturing plants, or the wheat midge will destroy the crop, in greater part at least. In order to succeed well on these rather light, but early ripening soils, "wheat," as the lecture remarks, "needs something to give it a start in the fall, and a little well-rotted manure, not plowed in deep," proves "very acceptable." It is found in practice that a loamy soil, in good heart, dressed with from ten to fifteen loads of composted manure per acre—the same mixed intimately and evenly with the surface soil—will give "that good start in the fall," which will enable our early varieties to come out "ahead of the midge," and produce profitable crops.

That manuring for the wheat crop is no new thing in Western New-York, we could readily show by reference to almost every statement of premium crops for the last fifteen years. For instance, in 1850, a Niagara county farmer harvested 63¼ bushels per acre, after manuring his ground with well-rotted barn manure at the rate of twenty loads per acre, and adding a top-dressing of 40 bushels of lime, over the whole field of nearly seven acres. This is a remarkable product, but there are many going above forty bushels, a large share of them owing their bounteous yield to some course of manuring, either from the barn-yard or compost heap, or by plowing under clover or top-dressings of lime or leached ashes, these last in some instances stimulating a very large product of grain.

Our heavy soils, most natural to wheat *when underdrained*, will bear, and well repay moderate applications of manure. In most cases, however, the effect sought could be more economically reached by applying the manure to the land while in grass, to be plowed under for some other crop, or for wheat the succeeding year, yet when the soil needs something to start the wheat in the fall, a light surface dressing would be a most judicious application. On compact clays wanting largely in vegetable matter, a larger dressing would have an excellent mechanical, as well as manurial effect, though it might produce too heavy, and above all, a too late ripening growth of wheat, to prove secure against the midge and perhaps other casualties.

We promised to indicate some very generally available resources for manure, but have scarcely room or need to do so, if the reader will re-peruse our recent article on the "Manurial Resources of the Farm," (Co. Gent., June 14, '60,) where we spoke at some length on the general subject. Briefly, however, on a point or two.

Could we turn under a good growth of grass or clover, say a month before sowing on our wheat, and then properly reduce the surface soil for drilling in the seed, we should think the prospect good for a crop, though it would still be improved by some fertilizing application on the surface. We but here repeat an old authority on the subject: Thaer, in his *Principles of Agriculture*, remarks that "the best and most successful way of obtaining good wheat crops, is to sow on broken-up clover land; and if on friable loam, after one single plowing." He would plow under the second growth of clover when eight or ten inches high, and a month before seeding, that it may have time to decompose and the ground become equalized. This, Mr. Harris allows may be a good practice on light soils, but—and we agree with him in the opinion—on heavy soils it would be better to summer fallow and apply the same clover after it had been fed to cattle or sheep. In this case a light dressing of good barn manure, well rotted, would be better than a heavy green manuring of clover, especially in its effect upon the product of grain.

On loamy soils needing lime, (as shown by the growth of sorrel, yellow dock, and the like,) we think very favorably of applying a muck and lime compost, well decomposed together as a preparation for the wheat crop. Muck that is already partially decomposed can soon be prepared for use. The process is as follows: Make a bed of muck a foot thick, of a size suitable to the amount to be composted. Over this spread a layer of fresh slaked lime at least one inch in thickness. Put on in the same way other layers of muck and lime, varying the thickness of the former according to the quantity of lime to be used. Some farmers of considerable experience use from six to eight per cent., others less than one-half the amount, according to the nature and acidity of the muck. The lime should be slaked in brine—using a bushel of salt dissolved in water to six bushels of lime. When the decomposition becomes active, which it will in a few weeks, the heap should be shoveled over and well mixed, and will very soon be ready for use. From twelve to fifteen loads per acre would produce good results, especially if intimately and equally mixed with the surface soil.

Muck and ashes may be composted in the same way, or muck and any fermenting manure. One-third good stable manure to two-thirds muck forms an excellent compost for any crop, and from repeated experiments we are prepared to commend it as valuable for the particular use of which we have spoken in this article. In conclusion, we would particularly commend the application of muck composts, in all cases where the farmer may avail himself of the material—very likely it is just what is needed to restore his farm to a condition for profitable wheat growing, under judicious management.

TWO PLANS OF HOUSES.

We have received at different times many plans of dwellings from our correspondents, for which they will please accept our thanks. Some of them, which have appeared the most meritorious, we have occasionally inserted in our columns. The necessity of both re-drawing and reducing them in size, involves considerable labor, and has in some instances delayed their appearance longer than we have intended. This is the case with the two plans we have here selected for insertion.

The first, (Figs. 1 and 2,) is from B. F. Fisher of Zilwaukie, Mich., with several alterations or improvements in accordance with his request. He makes the following accompanying remarks:—

"Here is a plan for a house, containing a full supply of suitable rooms for health, convenience, comfort, economy and gentility, and costing only from $750 to $1,500, according to the cost of materials. *Here* it would only cost the first sum. I think that in most places it could be built for $1,000. I wish to see the plan published in the Country Gentleman. It has many excellences, but I do not wish to take up the space to point them out now. I offer the plan for criticism."

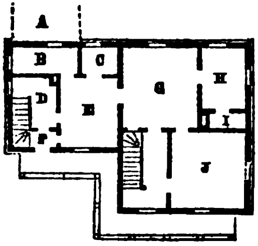


Fig. 1—Principal Floor.

J. Parlor—G Dining-room—E. Kitchen—H. Bed-room—I. Closet—C. Pantry—B. Wash-room—D. Store-room—F. Entry—A. Wood-house.

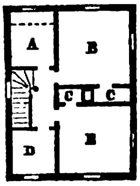


Fig. 2—Second Floor.

A. B. D. Bed-rooms—C. Closets—E. Library or Sitting-room.

The alterations we have made consist in, 1, connecting the two front verandahs, which were entirely separate in the plan sent, and consequently more contracted in appearance; 2, reducing the number of windows and enlarging the size of some; and, 3, in altering the arrangement of the second floor, by curving the stairs at the top, economizing room, and avoiding a bad shape to the larger of the rooms in the rear, caused by the projecting closet from the smaller rear room. If the latter needs a closet, it may be placed as the dotted lines indicate, removing the window to the other side.

This appears to be a neat and compact plan, and capable of being built at moderate cost for the room furnished. The kitchen has hardly enough light, there being but one window, and that under a veranda. The want of windows on opposite sides may make it hot in dog-days; this objection may however be partly obviated by opening the door and window of the pantry, or by allowing fresh air to blow from the wood-house.

The second design is from Clark Swallow of East Bridgewater, Mass. He remarks:—

"I take the liberty to send a sketch of a plan of a cottage house, built for myself the past season, from a plan of my own. I looked in vain to find a plan to suit me in all the books that I could find, including your excellent yearly, the Rural Register; I could find plans that would do, but were too costly for me, or those that were not large enough to accommodate my family. The plan I send you is well adapted to the wants of the mechanic, the farmer, or the gentleman, and to those of moderate or good circumstances. The same plan can be made to cost from $1,200 to $3,000. My house cost $1,500, all ready to move in, all finished from cellar to the chambers. The same plan can be varied to suit builders, to have larger or smaller rooms, and still keep its well formed and beautiful proportions.

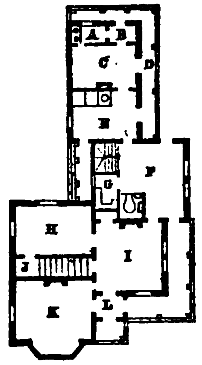


Fig. 3—Principal Floor.

L. Entry—K. Parlor, 16 by 15—I. Sitting-room, 16 by 15—H. Bed-room, 11 by 16—F. Kitchen, 16 by 17—G. Pantry—E. Wash-room, 10 by 14—C. Woodroom, 10 by 14—D. Grapery—B. Entry—A. Privy.

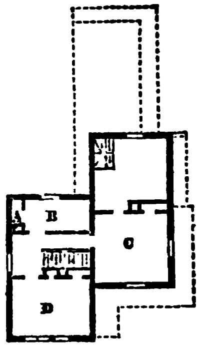


Fig. 4—Second Floor.

B. Bed-room, 8 by 12—C. Bed-room, 16 by 15—D. Bed-room, 15 by 12

"My house stands on the southrely side of the road, and from all the main rooms you can see the road; the kitchen is on the warm side in winter and cool side in summer. It is well adapted to a corner lot, and for any corner on the lot, no matter on which side of the street. Just imagine the plan on the other side of the paper, [i. e. hold it reversed up to the light,] and it will suit the north side of a road and face the south and west, as all houses should on that side, as this does on the south side.

"I find in most plans in the books, that the most essential parts are left out, that the inexperienced builder needs most—that is, a full working plan of the house, and the details of the contract between proprietor and contractor. I have thought that one good planned cottage, with elevations, perspective view, working plans and contract, with quality and cost of material, would be worth more to the people, if inserted in your Register, than half the costly books ever published.

"You will perceive that the main rooms are all about one size; and the long rafters will be all the same length; the bracket and outside finish cut on one bevel, which all carpenters will appreciate."

This plan is quite similar to the one given on page 24 of the first volume of Rural Affairs, and reversed; but as it contains some additional conveniences, we think it worthy of insertion. It is less compact in form than the preceding one, and will therefore require more exterior wall and cost more for the space furnished; but it supplies a greater number of conveniences, is better adapted for a fine house and would present a better external appearance, if the latter was properly designed.

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WATERING PLANTS.

During the summer it becomes necessary to resort to artificial watering for garden plants, trees, &c., and it is a matter of considerable importance to perform this operation in the best way and at the right time; the chief object being to supply just as much water as the plants need and no more. To do this, notice their condition at the time of application. If trees, which have been transplanted in the spring seem to be inactive, and thus throwing off but a small amount of moisture, very little water is required; young trees especially are apt to remain three or four weeks after being set out, without making any growth, and to give them an abundance of water would cause them to remain dormant rather than to help their growth. In such cases it is best to use water but very little. Again, if a tree grows fast and draws most of the moisture from the soil, water should be given, but not upon the surface. Break the top soil, and let the water soak well into the ground and not run off or form a hard crust upon the surface.

In watering garden plants the operation often does more hurt than good. By applying it on the top a crust is formed, and if water is again poured upon this crust it immediately runs off or helps to make a thicker crust upon the surface. This keeps the ground dry and the plant makes but a poor progress. A better way is to make several holes in the plant beds, or small ones by the side of the plant and pour the water into them. In this way it gradually soaks into the earth and the moisture is easily obtained by the rootlets of the plant. It is indeed the only proper way of artificial watering.

Evening is the best time to water plants. The sun is not shining and the state of the atmosphere is usually moist, which prevents a ready evaporation. L.

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[For the Country Gentleman and Cultivator.]

GRAPES IN TEXAS.

This is a fine grape region, and seems to be peculiarly adapted to the growth of the vine, and the making of wine. The Mustang grape is very common, covering many a tree. It is now beginning to ripen. Its grapes are large, of a black or deep blue when ripe. Its racemes are small but abundant. Some vines are said to produce as high as forty or fifty bushels of grapes. It is a great runner, sometimes extending over more than one tree. I measured a vine recently which was eight inches in diameter. It almost covered a large post oak. The Mustang wine is of a rich, red color, acid, and pronounced by many to be superior to any native wine. This grape seems to be a form of the vitis labrusca, the parent of some of our best native grapes.

The Post Oak grape is another common grape in this section, but it is so low in its habit that its grapes are rarely suffered to mature, being greedily devoured by wild and domestic animals. They are large and purple, with a thin skin, and very pleasant for table use. This may be the vitis rupestris of Schule, but as I have not access to his description of that grape I cannot tell, only knowing that it is low in growth, and a native of Texas. I have been told of other grapes, some of which I hope to see, and I will then tell you some things about them. Before closing I will mention an instance showing the abundance of the Mustang grape, which was told me by Dr. Spann of Washington Co. He and his brother, with some eight or ten negroes, collected grapes in their vicinity and made seven hundred gallons of wine in about ten days. He said the time occupied in wine making did not exceed two weeks at the most. S. B. BUCKLEY.

Dresden, *Navarro Co.*, *Texas*, *July* 1, 1860.

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[For the Country Gentleman and Cultivator.]

MAXIMS FOR POULTRY KEEPERS.

Those who expect to be successful in raising or managing poultry, or hope to make it a paying part of farm business, should observe a few simple rules which will save them from much disappointment and trouble.

1. It is not advisable to keep large numbers of hens together, or go into the poultry business on a large scale. It is found impracticable and unprofitable—besides they cannot be kept in so healthy a condition as where but few are together.

2. It is impossible to keep hens to advantage without having a suitable and properly arranged house for their accommodation. This is as necessary as that a farmer should have a stable for his cattle, or a dwelling for his family.

3. In connection with the house, a poultry-yard should be provided, which should contain a grass plot, gravel, some quantities of slacked lime, and dry ashes.

4. The inside of the poultry house should be whitewashed twice a year or oftener, which will serve to keep it free from vermin, and the hens will be kept in better condition.

5. Pure water in sufficient quantities must be provided several times a day, in winter and in summer.

6. Feed should be given at regular periods. To fatten fowls, they must not be allowed to run at large. L.

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[For the Country Gentleman and Cultivator.]

SURFACE MANURING AGAIN.

THE WASHING OF THE MANURE IN TIMES OF RAIN.

MESSRS. EDITORS—I have no disposition, even if I had the ability and leisure, to enter into the discussion of this question. But as this is an excessively wet day—wind northeast and chilly—the out-door prospect dark and gloomy, I thought it a fit time to say a word upon this *dark* subject—the application of manure.

I have been led to this from an article in the CO. GENT. of June 28, p. 410, in which the writer uses many arguments, and makes some explanations to sustain his *theory.* Now this may all be satisfactory to him, and manure applied to the surface may be his best mode of using it—as in some cases it undoubtedly is—*not because nature*, "*his teacher*," points out *this* as the *best* way, but simply because the manure to be used, the soil upon which it is to be put, and the crop to follow, were better adapted to this mode of application.

Then again, the lay of the land, it seems to me, would make a good deal of difference as to the best and most economical way of applying manure. Hilly or rolling land that is liable to wash more or less during the fall, winter, and spring rains, and while the frost is in the ground, so that the water cannot settle off, or when the snow passes off rapidly in the spring, while the ground is yet frozen, except an inch or two of the surface, must lose much of the manure when put upon the surface in the fall. With land quite level and flat the objection would not be as great.

To illustrate from my own experience. My farm lies in an oblong form, it being about one-third longer than broad. The center, through the whole length, is considerably lower than either side, so much so that nearly all the surface water finds its way to the middle, where it passes off through a low strip of land into Black river, consequently this strip through the center was quite wet. When I bought the farm, ten years ago, I put a ditch through the center, the whole length, three feet wide and from two and a half to three feet deep. Into this I have brought several lateral stone drains, where they were most needed. Now in the fall and spring there is quite a stream of water running through this drain, also during winter thaws, and it brings with it a good deal of surface soil and mold from adjoining plowed land—of this I am sure, from the fact of my having a kind of sink or basin through which the water runs less rapidly, and the sediment has an opportunity to settle, or at least a portion of it, also from some depressions in the bottom of the drain, which soon become filled up after having been cleaned out.

Now if manure be put upon a surface similar to this in the fall, (and there is a good deal of such land,) how can a large waste be avoided from washing? If the manure is well rotted and fine it will pass off in the form of sediment —if coarse and raw, in a liquid form. At least I think it would be reasonable to expect this result.

I beg to be excused from "thinking a little longer," merely to force myself into the belief that nature's mode of *applying manure* is more perfect than many *other* things she does, where man has improved upon and modified her works. Nature brought us into the world in a state of nudity, but it would be hardly decent to remain so, or comfortable either, in dog days or with the thermometer much below zero. J. L. R. *Jefferson Co.*, *July* 5.

LETTER FROM JOHN JOHNSTON.

Near Geneva, July 5, 1860.

Messrs. Editors—Part of my wheat is about ready for the reaper, but the weather is bad, our hay suffering badly. Winter barley was harvested in this neighborhood 25th of June. I have little doubt but some wheat may be cut already on sandy soils. Midge does considerable damage in some fields, mine is comparatively free of that pest; all we want is good weather to insure a good crop of wheat, and of fine quality.

Tell A. Moss that I use no other preventive for ticks (keds, I notice, is the name for them in some parts of Europe) than good feeding, dry yards, and well littered, and not turn out in spring until they have pasture enough to feed them fully; in that way my sheep are never *infested* with ticks. I seldom shear any, or only a few now, as I sell them fat generally before shearing, but I superintended the shearing of 185 belonging to my son-in-law, who is in Europe, and neither the shearers or I could find a single tick, and they sheared over 5 pounds of wool each. Now those are kept on the same plan as I do mine. I had an idea that feeding oil meal was a preventive, but this last winter my son-in-law fed no oil cake meal, and he had 109 yearlings that were fed on clover hay and thirty bushels of buckwheat during the winter. If there was a tick on the lot we did not notice it. If other farmers would keep their sheep in the same manner, they would surely have no ticks. When I first commenced keeping sheep here I kept, *at least fed them*, like other farmers, only I made winter shelter; then they bred plenty of ticks. This I saw was unprofitable to me, and I commenced feeding better and littering the sheds and yards thoroughly, and I soon found I could raise sheep and not *let them* raise ticks, and I know every farmer can do the same if he keeps his sheep in a thriving condition all the year.

John Johnston.

[For the Country Gentleman and Cultivator.]

DRAINING AND THE MOLE PLOWS.

Eds. Co. Gent.—During the past few months much has appeared in your paper and elsewhere upon the use of the mole plow, in draining. Several patents have been issued for new machines, and considerable interest has been awakened upon the subject, especially among the farmers of the west, the experience of the past two years having very forcibly impressed upon their minds the necessity of drainage. Hence anything bearing upon this subject has been examined with unusual care. The manufacture of tiles is confined to very few places in the west, and their expense is a great obstacle in the way of their introduction.

Now we have here the finest scope for the use of the mole plow in the known world, for we have no stones or other obstructions in the way, and *if* the drain is only *durable*, we have no further excuse for not commencing the work in good earnest immediately. But here lies the difficulty. I have been satisfied from the first agitation of this subject that there were inseparable objections in the way, originating in the character of the soil and subsoil, but not until reading the article from "A. P." Galesburg, Ill., on page 347, Co. Gent., have I felt at liberty to indulge in anything farther than private doubts. A. P.'s experience is just what might have been expected from the nature of the soil. Any one familiar with the country, or the passing traveller cannot but perceive that its earthy formation is very peculiar—very unlike what we meet with at the east.

We have no hills, but plenty of gullies or "gulches"—the general appearance is that of a vast plain, the channels of whose streams have either dropped, melted, or washed out. The underlaying "joint clay," which is very tough and hard to penetrate when first brought to light, under the influence of air and frost, its moisture seems to melt and pass away like sugar—it crumbles very easily, and in a year or two makes the finest of soil particularly for wheat—such declivities as are cultivated to their very summit in the vicinity of Cincinnati, can never be cultivated here.

In the easy friability of these clayey subsoils lies the guarantee for the inexhaustibility of our soil, but this very feature constitutes an insuperable objection to the dispensing with tile—*we must drain, but must also face the music.* It is possible that where a *constant* stream of water can be had, mole draining may answer, but if allowed to become dry, the sides and roof will crumble and fall in.

I do hope that our farmers will be careful about investing in "patent" machines until the thing is fully and fairly tested. The country is so completely flooded with worthless trash called "patents," and backed up by as worthless venders, who stop at no amount of lying, so they but get the money, that a few words by way of caution may not be out of place. Prove all things and and hold fast that which is good. Hawk Eye. *Keokuk, June* 18.

[For the Country Gentleman and Cultivator.]

THE WHEAT MIDGE.

Eds. Co. Gent.—In your issue of June 21, I see the following note from J. Johnston, under date of June 11: "The wheat midge is very numerous, and prepared to deposit the nits. They are all of seven days earlier than last year." In the same number, on page 394, Olcott's Yale Lecture Report on the cultivation of the cereals, by Joseph Harris, we read: "If we could get wheat into bloom ten days earlier, we could escape that terrible insect pest, the midge."

The latter seems to have been the prevailing sentiment relative to the means of saving the wheat crop from insect depredations. But I have doubted its correctness. Insects which destroy our fruits or grains have a wonderful instinct as to the time their work is to be done.

I have in my orchard several different kinds of apple trees; among them is the Northern Spy, a tree which is some eight or ten days later in putting forth its leaves than any other in my collection. Now I have observed that the apple tree worm hatches just about as many days later on this tree as *it* is later than the others in putting forth its leaves. Nature thus provides against starvation, by withholding from life until food is provided to sustain that life.

So with the striped bugs which infest our vines. Their appearance is earlier or later, as an early or later season has prepared their appropriate food.

A similar law governs in the production of all our insect tribes. They have their appointed commissions to fulfil, and they will be sure to come at the right time to do their work. If we cheat them once or twice by stealing the march upon them, they will be sure to wake up early enough for us next time, and perchance they will come down upon us with double fury for their previous loss.

Is it not so with the midge? For several years Mr. Johnston, and some others, perhaps, about Geneva, have been trying to cheat the midge, by producing earlier kinds of wheat. And what is the result. Why, this year "the midge appears full seven days earlier than last year." And if they can get a grain ten days earlier than any which they now raise, they will find this insect wake to life early enough to do his work in its appointed time. I am confident, Messrs. Editors, that some other plan must be adopted to save the wheat crop from the midge than that proposed by Mr. Harris in his New-Haven lecture. What that plan is, it is not the object of this paper to suggest.

Clinton, N. Y., June 29. S. W. Raymond.

[For the Country Gentleman and Cultivator.]

QUESTION FOR BEE-KEEPERS.

Messrs. Editors—Can any experienced apiarist explain the reason why bees do not store honey from buckwheat? Formerly they stored *large quantities* from it, though of a dark color and inferior quality. But for two or three years past they have not made a pound of honey from it in this neighborhood. There is no smell of buckwheat around the hives—whereas there is always a *very strong* smell when bees are *storing* honey from buckwheat blossoms. When in blossom the buckwheat fields are covered with bees during the early part of the day. Then why do they make no honey from it? It is a mystery to me, and I venture no theory or hypothesis, but submit it to apiarists or botanists. G. W. L.

[For the Country Gentleman and Cultivator.]

LETTER FROM NORTH-CAROLINA.

The southeastern portion of Perquimans county is well adapted to wheat; very considerable quantities are annually shipped, via Dismal Swamp Canal, to New-York and Baltimore. The reaping is mostly done by cradling. The surface is so level as to require it to be plowed in narrow lands, and then a great many water furrows running crosswise are necessary to conduct the surface water to the main drains. Reapers therefore do not act well, owing to the inequalities of the surface. The soil is composed largely of clay, although the Geographies all tell us that North Carolina is a barren pine waste for 60 miles adjacent to the ocean. There is undoubtedly much poor, sandy land in this section of the state; but, with all due respect for the Geography men, I think that my native county (Perquimans) has some land whose fertility I have never seen surpassed by that of any other, except possibly some parts of the Mississippi Valley. In short, I can say, with confidence, that the portion of our State which lies north of Albemarle Sound and east of Roanoke river contains a large share of good land. Its greatest defect is its flatness, requiring expensive ditching operations.

The hog cholera (so called) has destroyed a great many animals here within a few years past, and has rendered pork raising unprofitable for the present.

Great quantities of strawberries and raspberries are annually sent to Norfolk, Va., from this and adjoining counties, and no doubt some of them find their way to New-York city.

The Scuppernong grape grows finely on our sandy soils. It is a native, and of excellent qualities. It requires very little care, beyond being provided with a scaffolding to keep it from the ground. One vine will cover a very large surface. My scaffolding, which is completely covered by a single vine, is 25 feet by 30 feet, and I am very sure that many can be found, each of which shall cover twice as much surface as mine does. Good wine has been made from it, but in this point I am not interested, except by way of regret, for I never use nor encourage others to use any intoxicating drinks as a beverage. There are certain conditions of *disease* in which alcoholic liquors are serviceable. They should only be used internally as *medicines;* and the same skill is necessary to direct their prescription as is required by other articles of the materia medica.

Sweet potatoes are an important crop with us, both for table use and for fattening our pork. The cornfield pea (of which there are many varieties) is extensively sown among corn, at the last working. The hogs are required to dig the potatoes and to gather the peas for themselves. After frost, however, it is not safe to leave the potatoes in the field, as they are easily damaged by cold weather.

Perquimans Co., N. C. WM. NICHOLSON.

HOW TO MAKE CURRANT WINE.

This article, as usually manufactured, is rather a cordial than a wine, and is entirely inferior to the common wine; but when properly made, it will be a very superior, healthful beverage, particularly for summer drink, when fully diluted with water.

We have experimented carefully on the making of currant wine, and the following will be found to give a result which we have found no difficulty in selling in large quantities at $1 per gallon.

Before pressing the juice from the currants pass them between a pair of rollers to crush them, after which they may be placed in a strong bag, and they will part with the juice readily by light pressure, such as a common screw, weights, &c. To each quart of juice add three pounds of treble refined loaf sugar—single refined is not sufficiently pure—then add as much water as will make one gallon. Or in other words, suppose the cask intended to be used be 30 gallons. In this put 30 quarts of currant juice, 90 lbs. of double refined sugar, and fill the cask to the bung with water; roll it over until the ugar is all dissolved. This will be told by its ceasing to settles in the barrel. Next day roll it again, and place it in a cellar where the temperature will be sure to be even, leaving the bung loose for the free admission of air. In the course of one or two or three days, fermentation will commence. In placing the ear to the bung hole, a slight noise will be heard, such as may be observed when carbonic acid is escaping from champagne or soda water. Fermentation will continue for a few weeks, converting the sugar into alcohol. As soon as this ceases, drive the bung in tightly, and leave the cask for six months, at the end of which time the wine may be drawn off perfectly clear, without any excess of sweetness.—*Mass. Ploughman.*

RAISING RED CEDAR FROM SEED.

A correspondent lately made an inquiry as to the best mode of raising the Red Cedar from the berries. We find the following mode described in the Report of the Wisconsin Fruit Growers' Association, by Samuel Edwards, an experienced nurseryman. Bruise the berries early in March, and mix with an equal or greater bulk of wet wood ashes. In three weeks the alcali will have *cut* the resinous gum, when the seeds may be washed clean from the pulp. Sow in rows a foot apart, (to admit clean cultivation,) in a rich soil, well dressed with a mixtnre of leaf mold and sharp sand. Shade the bed during summer, and cover with two inches of leaves for winter.

[For the Country Gentleman and Cultivator.]

CORN COBS.

We should judge that some farmers conclude that it would be as profitable to discuss the propriety of feeding saw-dust to stock as to grind up corn cobs for that purpose. Because they are of not much value themselves, it does not prove that they may not be ground with other grain to some advantage. I am acquainted with a farmer who was in the habit of feeding from twenty to thirty large oxen every winter, and he always bought his corn in the ear and had it ground in that shape—for the reason that his oxen never failed of doing well when fed with cob meal—while on the other hand, when fed with clear meal they were very likely to become cloyed. For the last five years farmers in this vicinity grind nearly all of their corn in the ear for all kinds of stock except fat hogs, showing a change in that respect, for twenty years ago, little if any was ground in that shape.

That there is a little virtue in them may be proved from the following fact: A poor man who had one cow was unable to supply her with hay on account of scarcity, managed to keep her alive by grinding cobs for her, which he obtained from his neighbor, who raised a large crop of corn, and after shelling it threw the cobs out by the side of the road. We don't know how much the miller made by tolling the *cobs.* J. B. B. *New Braintree, Mass.*

[For the Country Gentleman and Cultivator.]

Cocoa Nut Drops--No. I.

Take one cocoa nut, grate and dry it a little—then mix with the beaten whites of ten eggs and 16 teaspoonfuls of powdered sugar—make them up in little round balls, and bake them quickly, and you will have the best kind of drops that you ever tasted. MARY.

French Leaf Cake.

1 pound of flour.
¾ do. of brown sugar.
½ do. butter.
4 eggs.
1 wine glass of sweet cream.
1 do. wine.
1 teaspoonful of soda.
1 pound of raisins.
1 do. currants.
½ do. citron.
Spice to suit the taste. MARY.

Bathe the parts affected with water in which potatoes have been boiled, as hot as can be borne just before going to bed; by the next morning the pain will be much relieved, if not removed. One application of this simple remedy has cured the most obstinate rheumatic pains.—*Family Herald.*

Inquiries and Answers.

Raising the Locust from Seed.—I have a prairie farm and am anxious to raise a locust grove. Many in this vicinity have tried to raise locust trees, but owing to mistreatment in the raising or misjudgment in the selection of seed, none have succeeded very well. I have on hand about a pound of seed which was sent me from northern New-York, and as we are about a degree further south than where the seed were raised, I do not fear winter killing if properly attended to. Can you or some of the many readers of The Cultivator, advise me as to the manner of sowing, time, culture, &c., &c ? *My* object is to ornament a building-place, but as *timber* is rather scarce in this part of the State, if locust was *once fairly introduced*, a few years would supply many neighborhoods where now there is a deficiency. R. P. Moore. *Otranto, Iowa, June* 16, 1860. [To induce locust seed to grow, pour boiling water on them, in quantities of a quart or so in a small vessel, so that the water will not remain hot long, and let them stand several hours. A number of them will be found swollen to double size. Select and plant these, and they will grow—the unswollen will not. Repeat the process on the remainder, successively, until all are prepared, planting the swollen seed at each repetition of the work. They should be planted in drills where they may be cultivated and kept clean, and they will grow much faster than if neglected and allowed to become enveloped with weeds and grass. If the seed are good, this will insure success.]

The "Iron Weed."—We are much annoyed in this region with the Iron weed; it is exceedingly unsightly, and spreads all over our best pasture lands. Can you, or any of your readers, give me directions for its extermination without continued cultivation, which is not entirely practicable in all of our pasture ground, owing to some of it being in timber. It is said that certain seasons of the year are favorable for its extirpation. Can you give us any such information as would serve us? P. D. *Bullitt Co., Ky.* [We hope some of our readers will be able to reply.]

Binding the Co. Gent.—I have several vols. of your paper unbound—do you get up covers to bind the paper, and thus have uniformity in all the volumes? [No.] Could you furnish all of the volumes of the Gentleman, and if so, what would be the price? P. D. *Kentucky.* [Not at present. The price for bound volumes is $1.75 each—we have several orders registered for complete sets, and supply whenever we have the opportunity to purchase missing Numbers, so as to complete volumes that are defective.]

Root Crops.—In your issue of July 5 I notice an interesting and timely article on the cultivation of roots. Having some two acres planted with roots, and having had but little experience in this department of agriculture, the author would confer a favor by giving his experience in harvesting, curing, cleaning, and the best method of keeping them through the winter, my intention being to feed them to the cattle.

New-York. A. J. M.

Whitewashing Trees.—Is whitewash beneficial to fruit trees? C. B. Griffis. [If made from good fresh lime, and put on *quite thin*, so as to penetrate crevices in the bark, and not to form a scaly coat, whitewashing is beneficial to the bark of trees, and tends to destroy the eggs of insects; but the unnatural whiteness spoils their appearance. We prefer a moderate solution of potash, soap suds, or ashes and water.]

Books on Orcharding.—Please inform me where to procure the best work on the culture of fruit trees, the apple and peach especially—combining, if possible, the general horticultural information required by an amateur. Thos. J. Mattingly. *Plattsburgh, Mo.* [The standard fruit books published by C. M. Saxton, Barker & Co., and sold at this office, or sent by us by mail, will give the desired information—Thomas' American Fruit Culturist or Barry's Fruit Garden at $1.25 each, or Downing's Fruit and Fruit Trees for $1.50.]

Destroying Willows.—One of your subscribers has a piece of marshy land covered with yellow willow bushes. Will mowing them in August kill the roots? S. B. D. *Milwaukee, Wis.* [A single cutting will not destroy them, but if the sprouts or suckers are kept rubbed off for some time, the roots will die for want of food through the leaves. We are unable to say precisely what amount of labor of this kind will be required.]

Rhubarb Wine.—What is the best recipe for Rhubarb Wine? I have seen several, but none that appeared to be O. K.—You would, by publishing one, no doubt oblige many of your readers, including An Old Subscriber. *Pittsburgh, Pa.* [Can some of our readers answer the above?]

Grass.—Please give me the botanical name of the enclosed specimen of grass, and where I can procure the seed, and at what price per pound. I find it growing in small patches on my lawn, and sown in rich soil it will not grow to exceed four inches in height. It makes a beautiful compact turf, the very thing for lawns, as it would need but very little cutting. J. R. Gardner. *Montgomery Co., Va.* [The specimen forwarded is somewhat injured, but appears to be a half grown plant of *Poa annua*, a small annual grass, common in dooryards, of very light green color. As it is reproduced annually from seed, it is doubtful if it would form a strong permanent turf. The Poa annua often grows 6 or 7 inches long, which is more than our correspondent states; if the sort sent us is never over 4 inches, and has not the peculiar yellowish green color of the annual Poa, we should be glad to receive further and more matured specimens, dried previously between the leaves of a book under pressure, (20 lbs. or more.) The subject of selecting the best species of grass for lawns should not be lost sight of; we shall not probably find one that will answer well that does not need mowing; but if one could be obtained with fine, hair-like, dense foliage, so as to form a softer and more velvet like surface than red top and white clover, it would be an acquisition. Among the several native species, possibly there may be one.]

Pumps.—It seems to me the subscribers to the Co. Gent. appeal to you for all sorts of information from the building of "Hornet's nests" to the Atlantic cable. Allow me, therefore, to ask if there is anything new in the pump line for lifting water from wells? For four or five years I have been using the rotary pump, made up of links six inches long, with Indian rubber balls every five or six feet apart. This pump worked very easy, a child 4 years old could turn it, but it has worn out and I cannot replace it in Richmond. It was very liable to get out of order. My wells are 24 feet deep. D. S. D. *Henrico Co., Va.* [We are not aware of anything decidedly new and valuable in the construction and manufacture of pumps—but would invite our correspondents to give us their best and latest information derived from experiments. We have known some modifications of the forcing pump to work admirably in rather deep wells.]

Foundered Stock.—I shall feel obliged if through your valuable paper the Co. Gent., you would give me a remedy for any kind of stock which may get into a cornfield and eat too much; it is a common occurrence here—I lost a yearling steer last fall, and would like to be prepared with a sure remedy as the danger approaches. W. A. *Iowa City.* [Will some of our correspondents reply to the above.]

Willard's Root Slicer.—Please inform me through the Country Gent., where the Willard Root Slicer can be procured, and at what price. If such things were advertised in our agricultural papers I think a great many would find their way to the west. H. A. T. *Marshal, Mich.* [It can be procured we believe, of Geo. Campbell, West-Westminster, Vt.]

Pumpkins.—Will any of the contributors of the Country Gentleman furnish me with the information, how to keep pumpkins from decaying during the winter? I am very anxious to know, as I expect to raise a considerable quantity this year. I should also like to know the best method of preserving sweet potatoes. R. B. P. *Warsaw, Va.*

Seeding to Grass and Clover.—How would it do to seed down with timothy in the fall and clover the next spring—rolling or harrowing in the clover. *New-York.* [This is a course often practiced, and succeeds well with rolling when the soil is dry enough to allow it. A common harrow would be too coarse and rough.]

Disease of the Peach.—Can you or any of your readers tell me anything of a new disease upon the peach tree? The bark upon the roots commences dying, and extends up and around the trunk of the tree until it kills it. I find this upon trees that have no worms in them. J. R. Gardner.

Montgomery Co, Va.

Elderberry Wine.—Will not some of your subscribers send me through the columns of the Co. Gent., a recipe for making "Elderberry Wine." It will much oblige A. B. R.

Heaves in Cows.—We have a cow that acts and breathes very much like a horse with heaves. Can you or your correspondents suggest anything in the case, and oblige A. Moss. *Belvidere, Ill.*

Books on Husbandry, &c.—Please inform me what is the most reliable work that I could purchase, comprising a treatise on the general management of farm, and stock of all descriptions, and the price. Also a separate treatise on the *Diseases* and management of sheep and cattle. J. B. J. [Allen's Farm

Book is a good treatise of its size, price $1, and Allen's Domestic Animals contains much in relation to their diseases and management, price 75 cents. Dadd's two treatises on the Horse and on Cattle are more recent and more complete works, price each $1 00. The two published volumes of "Rural Affairs," contain more on the subject of general farm management, and the various details, than any other work of the size, price $1 per vol.]

Scratching in Horses.—I have a horse that is continually rubbing, scratching, and biting himself whenever he is in the stable or pasture. If you or some of your subscribers would prescribe a remedy, you will confer a favor. A Reader of The Cultivator. [It is important to ascertain the cause before selecting a remedy. If it comes from lice, as is not unfrequently the case, which usually proceed from *poultry*, remove the poultry, wash well the stable with hot water, and then whitewash it. To kill the lice and cure the skin, Dr. Dadd recommends a mixture of equal parts of linseed oil and spirits of turpentine, with twice as much more as both, of pyroligneous acid, to be applied three times a day, afterwards washing with soap and water. Or, the vermin may be killed by sponging with an infusion of lobelia. Sometimes the skin is affected by a bad state of the stomach; a change of diet is the remedy, to which treatment may be added giving a little sulphur with the food. If the mange or itch is the difficulty, sponge with lime water, give sulphur, and sponge again with the first mentioned liquor above, with a little sulphur added.]

Query for Wheat Growers.—I have a side hill of about seven acres, sloping towards the west. The soil is a heavy sand loam on the upper part of the hill; further down is a clayish loam; still further down, towards the bottom, is a stiff clay, but fall plowing renders it quite mellow. It has been pastured with cattle or sheep for ten years past. I think the land sufficiently strong to bear a good crop. I plowed it last fall—this spring pulverized with cultivator harrow and sowed to oats. Shall harvest a good crop. I would like to sow it to wheat this fall. What I desire to know is, your opinion, or the opinion of some of your wheat growing correspondents, as to the expediency of sowing wheat on such soils, in this locality, (35 miles north of your city, in the valley of the Hudson,) also what is the best variety sown in this part of the State, and the best time to sow in order to have it the least exposed to the ravages of the fly? This was formerly a fine wheat growing county, but recently there has been little or none grown on account of the destructive effect of the weevil.

Saratoga Co. Sam'l Sheldon.

Superphosphate of Lime.—Can you, or some one of your correspondents, tell your readers how superphosphate of lime may be manufactured. Many of us have been humbugged quite enough with the articles that are sold for superphosphate. For my part, I have no doubt of the value of the genuine as a fertilizer, and if we could by some economical process manufacture the article ourselves, we should know at least what we invested our money in, and if it proved valuable as a manure, receive some benefit from it. I was shown some corn the other day, where the material from different manufacturers was tested side by side; the difference was apparent at forty rods distant. With one, there was no perceptible difference between the row and the next which had no manure applied; while on the other side, a row to which was applied the product of another manufacturer, the corn was such as we all like to see, and nearly twice the heighth of the former. The conditions otherwise, were as nearly alike as possible. E. E. W. *Concord, N. H.*

Pea Nuts.—Will the Co. Gent. please inform me how Peanuts are cultivated, also if they grow under ground same as a Potato, if so why they are covered with so hard a shell? Hoping you will give this your earliest attention I remain. R. T. Brooks. [As the pea-nut cannot be cultivated in the northern States, we have no practical knowledge of its management. The plant is the *Arachis hypogea*, belonging to the same natural order as the pea, bean, &c. The specific name ("below ground") is an allusion to the unusual circumstances of the pods, as they increase in size, forcing themselves into the earth. The seed are planted about a foot apart, in sandy or alluvial ground, and the plants are earthed up as the pods form. For further information, we desire the experience of some of our southern readers who have had practical experience with this crop.]

Culture of the Blackberry.—If convenient, I should like to see an account of the cultivation of blackberries in the next no. F. A. R. *Annapolis, Md.* [Procure plants which have been propagated from cuttings of the roots, (suckers are apt to be one-sided and destitute of small fibres,) of moderate or rather small size, as these succeed best. Plant them in a good rich soil, good enough for corn or cabbages, about four by six feet. Cultivate them well,—if the plantation is extensive, by horse power,—and in summer, as soon as the shoots are three or four feet high, pinch off the top to induce a thicker growth and to send out side-shoots. These will bear another year.]

Binder attached to Reaping Machines.—There was something said in a former no. of the Co. Gent., about a binder to be attached to reaping machines. I want to hear something more about them. Let those that have used them speak for or against them as their merits deserve. Such a machine will be a valuable one here, as hands are scarce. Let those who have used these binders, state what kind of reapers they were attached to, and their cost ready for work.

Richland Co., Ohio, July 16. Levi Hawk.

When does the Milk Sour?—In the Country Gentleman of July 12th, you give the opinion of a dairy woman in western New-York, as to when milk should be skimmed. She says, just as the milk begins to sour in the bottom of the pans. Can you inform me how we are to know when the milk is sour in the *bottom* of the pans? If you or your correspondents can answer this, I will be obliged.

John Snell. *Canada West.*

Prices of Lands in New-York.—Our Virginia correspondent, who inquires about the price of farms in eastern and central New-York, is informed that the prices will vary from $30 to $100 per acre, according to quality of soil, location, improvements, &c. Good farms, with tolerable buildings, and in good locations, could probably be bought for $75 per acre.

Query about Wheat.—Is there a variety of white wheat that ripens as early as the Mediterranean, and is no more injured by the Hessian fly than the red chaffed Mediterranean? A variety that produces as well as the white blue stem has, before the midge made their appearance. If there is, where can I get it, and at what price? H. K. *Wrightsville, Pa.*

Cotton Seed Oil.—I should be glad to get more information on the making of Cotton Seed Oil than I have seen in the Country Gentleman, or the Patent Office Report of 1855. W. C. H. *Maryland.* [The inquiry upon this subject is constantly extending; we trust a reply may be elicited.]

Bright on Grape Culture.—You will please to inform me where I could obtain "Bright's System of Grape Culture." J. Pollock. [In answer to the above and similar inquiries from others, enclose 50 cents in P. O. stamps to Wm. Bright, 627 Market-st., Philadelphia, Pa.]

[For the Country Gentleman and Cultivator.]

GOOD RHUBARB WINE.

In answer to "An Old Subscriber" I submit below a recipe made up from many others, and I think it produces an excellent wine, closely resembling in taste and color the best sherry after two or three years ago.

Recipe.—Take, for instance, a 40 gallon cask. Fill it nearly full of rhubarb juice and water in equal proportions. Then dissolve 120 lbs. best white sugar, and add to this one tablespoonful of sulphuric acid to over five gallons wine. This converts the sugar into grape sugar. Then fill the cask full and set it in an equable temperature to ferment with the bung lightly laid on the hole. Let it stand until fermentation entirely ceases; then add the beaten whites of eight eggs and shake the cask well and keep it open for a week. Then rack it off into a clean cask and bung it up or bottle it and let it stand for a year or two, when it will be better and more wholesome than nine-tenths of the foreign wines in the market. I will add, that all other domestic wines may be made after this recipe, only adding or decreasing the quantity of sugar and water as the fruit juice is more or less acid than the rhubarb juice. Charles Stewart. *Pennsylvania.*

Recipe from Another Correspondent.

Messrs. Editors—A few years ago, while visiting in the Connecticut valley, I drank some rhubarb wine, clear, sparkling and delicious. My host said, as he smacked his lips over it, that it equalled the best champagne, and he was a person well acquainted with wines, both foreign and domestic.

I afterwards got the recipe, and send it now, hoping it may meet the want of your "Old Subscriber."

Take 1 gallon of rhubarb well bruised, add 1½ gallons of cold water. Let it stand 3 days, stirring it every day. Then strain it, and to each gallon of the liquid put 4 pounds of loaf sugar. Keep it one or two months, or until it seems to have done working, then bottle it. H. *Keene, N. H.*

THE CULTIVATOR.

ALBANY, N. Y., AUGUST, 1860.

☞ The truth that improvement *is* gaining ground, however slowly, among the Farmers of this country, is one of which additional evidences are afforded to the careful observer in almost any direction in which he may direct his scrutiny. In the course of our last volume we referred at considerable length to one or two instances in this County, in which, particularly, gratifying proof was given that changes for the better are getting a foothold, by the extension of drainage, the feeding of mutton and beef, better tillage, more manuring, and the extended cultivation of roots—changes here, as elsewhere in our older states, by no means yet entitled to rank as a revolution, and sometimes, indeed, proceeding almost imperceptibly, but still such as to warrant us in deriving from them encouragement for the Present, and a considerable contrast with the Past of ten or fifteen years ago.

Last week we had the opportunity of driving out several miles into the towns of Bethlehem and New-Scotland. Col. Wm. H. Slingerland, whose home farm is between five and six miles from the city, has there occupied about a hundred and fifty acres for ten or twelve years. When he went on to the farm, not an acre would cut a ton of hay—now he will mow 60 or 65 acres, and has no doubt it will average two tons throughout; last year a patch of six acres in oats yielded 106 bushels per acre, and his oat field this year promises 100 throughout, notwithstanding the season is considerably less favorable. He has laid three or four miles of tile drain, and is constantly putting in tile as a field needing drainage comes to be broken up. He has an excellent barn for convenience, and saves carefully the manure there accumulated—using also largely of plaster and ashes, which—especially, perhaps, the latter—prove admirably effective upon his soil, a tolerably heavy loam, while lime has never seemed to do it much good.

Impressed with the importance to the farmer of a better class of stock, Mr. S. has been breeding Short-Horns for several years, alone, and in company with Messrs. Bullock & Hurst, to which partnership belongs the frequently noticed bull 'Neptune.' The cattle were looking well, although receiving no extra care. Without having at present the space to particularize, it is at least proper to add that Mr. S. and his associates will be doing a good work indeed, if they induce more of the farmers of the county to take that most important of all steps in the improvement of their stock—never breeding except to a bull of good character and descent. The means of taking this step are now easily within the reach of nearly all.

Driving on a mile or two we called hurriedly upon Capt. Hilton, who has been co-operating toward this end, by the introduction of Devons; a stroll into the pastures carried us among them, and we were much pleased with their condition and appearance. Capt. H. has been setting out a good deal of fruit since his place was noticed two or three years ago in our columns.

These notes must, however, be concluded. The interest with which the farmers of the neighborhood watched a dozen years ago the first operation of a Mowing machine on Col. Slingerland's farm—an improvement which, since that time, has been worth to them by its general adoption probably thousands upon thousands of dollars—has been in some measure paralleled by their curiosity in the matter of drainage and other improvements, but these latter, not appealing so immediately as it seems, to the pocket, would naturally win their way more gradually. We may repeat in closing, a remark we have heretofore made more than once—that the Farmers of this region possess some most important advantages in the excellence of their home market and other respects, and that we hope to see the County itself in time ranking correspondingly well, in comparison with other parts of the State heretofore more noted for their agriculture.

☞ Our foreign exchanges are already full of the Agricultural Shows of the present season. Many of them we should like to notice if our space permitted. The Essex Society has just had its exhibition at Saffron Walden, and the account of it teems with familiar names. The Oxford and Banbury Society has just held its show at the latter place, and "Royal Turk" comes from it with a challenge cup as the best horned animal in the yard. In Scotland Glasgow has been the scene of one exhibition and Stirling of another, accounts of which are among our last advices. The present month is to be a still more active one than June—the Royal Ag. Society closes its General Meeting at Canterbury this week; the Irish Society meets at Cork, July 25–27, and several of the most important provincial shows occupy busily the interim.

— Across the channel, we already have accounts of the National Show at Paris as "a great success." For the second time "the Palace of Industry, built in that unique promenade, the Champs Elysées, for the Great Universal Exhibition of the Industry of all Nations in the year 1855, has been turned into a temple dedicated to the products of agriculture." The Mark Lane Express has a special correspondent there, and Edinboro' is represented by the Editor of the North British Agriculturist. "Never," says the latter, "in any previous exhibition connected with agriculture has there been such an extensive display of stock, implements, and products of the soil. The French Government is bestowing more attention on agricultural improvement, than any other Government in Europe." But our contemporary argues "that the Government would attain their purpose much more economically, and at the same time more effectually, were such exhibitions more directly connected with the practical agriculturists of France." This may be true, but we saw last year how it is a part of the French system to retain all these things in the hands of Government directly; it is the Emperor by deputy who conducts the local as well as National Shows, and it is very possible that private enterprise in France could never accomplish, even if it could be brought to undertake, what is now done by the public funds in the hands of the Ministry of Agriculture.

— In France—now that we are fairly there—the season has this year been a backward and peculiar one. We have already referred to the cold and stormy character of the spring, and the severity of the preceding winter. The prospects of the French husbandman are quoted as anything but bright, as late as the 20th of June; there had been consequent excitement in the grain markets, and rising prices are anticipated—indeed an advance the previous week had unsettled business—holders unwilling to sell, millers and merchants anxious to increase their stocks. France, it is stated, apparently on good authority, "will doubtless require large imports of grain to supplement a deficient crop, and thus tend to raise prices over the whole of Europe and America."

☞ No other European nation is apparently more eager at present to acquaint itself with the improvements of others, than Russia. This is true in Agriculture as well as with regard to other arts. The Russian government is now establishing at St. Petersburgh an Imperial Agricultural Museum for the collection and exhibition of Implements and Machines of husbandry, and has taken measures to secure an assortment of the best American manufacture for this purpose. The commission having the subject in charge, accompanied by the Russian Consul-General at New-York, recently visited Albany, and after a careful examination of some of our manufacturing establishments, as well as of the collection deposited in the Museum of our State Agricultural Society, made an arrangement with Messrs. Emery Brothers not only for samples of the machinery of their own construction, but also for the selection of an additional assortment—the shipment of the whole of which, we learn, has just been completed, and they will arrive out in ample season for the grand Imperial Fair, to take place at St. Petersburgh in September next.

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☞ What the Farmers and Gardeners of Long Island produce for market and procure from New-York, is well illustrated in the following figures, for which we are indebted to an attentive correspondent in Brooklyn, J. I. SHIPMAN, Esq. These statements include very little from the immediate vicinity of that city however, the greater part of the articles enumerated having been shipped from stations over twenty miles out from Brooklyn. Market gardeners within that distance generally bring in their produce in wagons, and carry out manure on their return. The table below gives the shipments of the articles named during the years 1858 and 1859, by Railroad into Brooklyn and New-York:

	1858.	1859.
Potatoes, bushels,	171,449	168,378
Peaches, baskets,	5,044	(crop failed.)
Milk, quarts,	8,221,158	8,197,910
Blackberries, quarts,	61,879	100,245
Fish, (for market,) tons,	2,200	2,284
Guano, tons,	1,712	1,721
Horse manure, carmen loads,	71,077	105,466
Ashes, bushels,	189,364	817,774
Hay, tons,	1,200	2,900

The accounts of the Long Island Railroad Company also show that the number of cart loads of stable manure boated from New-York city and sent eastward on their line, has been constantly upon the increase for the past six years. For instance the number of cartloads shipped during

The year	ending	March 31,	1855, was,	19,177
do.	do.	do,	1856, was,	25,167
do.	do.	do.	1857, was,	39,102
do.	do.	do.	1858, was,	36,515
do.	do.	do.	1859, was,	71,077
do,	do.	do.	1860, was,	92,269

◆

AN AGRICULTURE THAT IS NOT EXHAUSTIVE.—Our friend of the Homestead in commenting upon the fears expressed by Liebig, Mechi and other "good people," that the world at large and England particularly are destined to ultimate barrenness, remarks very justly—and to American farmers very suggestively—that "it is better to know how to get 90 bushels of corn to the acre, and exhaust the land by so doing if you do not manure sufficiently, than not to know how to get over 20, or not to dare to for fear of robbing your grandchildren." But what goes before this remark will help to explain its meaning: —

> "As a general rule those farms *are undergoing the exhausting skinning process fastest, where the crops are and have been smallest*. Go on with your draining and deep plowing, and 'exhausting tillage,' just so long as you get increasing fertility to reward your labors, but at the same time add those substances which you remove, or stand ready to do so the moment, or rather just before the supply in the soil is too much exhausted. If you fail in your calculations, and a year or two the crops drag hard upon the supply, the world will not come to an end; there is manurial material enough left in the soil and at large in the world, and a little time and proper additions will make all right. This is not a desirable condition of things, certainly; but it is much better to be able to take all out of a soil that you choose, than to be able only to take a certain limited portion."

In other words, if we in the older States can make manure enough to get really good crops off from our land, now, we can make and procure enough to maintain these crops, in all probability. What is true of all pursuits in the world—the rarest cases of apparent chance alone excepted—is we believe equally true in Farming:—*if we do our very best in the present*, the future will to a great degree take care of itself. "Alas," sadly says our contemporary, "Alas, we know of not one solitary farm whereon as much manure is made as possible!" This is *the* great point, to which all experience abroad and at home bears ample witness that our attention must be mainly directed, in order to secure a system of Agriculture that is not exhaustive.

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☞ Gen. J. S. GOE of Fayette Co., Pa., had his Annual Sheep-Shearing on the 31st ult., an account of the proceedings at which was received too late for our last number. A President of the meeting was chosen, who appointed a committee to superintend the shearing and weighing of the fleeces, &c. They made a report highly commendatory of Gen. G.'s flock of Spanish Merinos, as well as of his Black Hawk and other horses and Short-Horned cattle, which is too long for publication in our columns. It appears that 30 Spanish Merino ewes were sheared which had been washed, and 44 which had not been washed. The average weight of fleece for the former lot was 6 lbs. 2 oz., and for the latter not quite 8¼ lbs. Three bucks were also sheared of the same breed, giving fleeces respectively of 18 lbs. 5 oz., 12 lbs. 6 oz., and 13 lbs. 8 oz.—and these, as well as all the others, are said to have been fleeces of only one year's growth or under.

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GENESEE VALLEY HORTICULTURAL SOCIETY.—At the late exhibition of this Society, the collection of roses was perhaps unsurpassed by anything of the kind in this country. Corinthian Hall presented a brilliant display. Ellwanger & Barry and A. Frost & Co., each had on the table between 400 and 500 varieties, among which there were nearly three hundred sorts of hybrid perpetuals in each collection. The former had about fifty kinds of Moss roses. But it was not so much the large number, as the richness and rareness of many of the specimens that rendered them remarkable. The combination of colors as shown in the profusion of brilliant flowers, bursting buds, and green leaves, in a large portion of those from Ellwanger & Barry excited much admiration.

The Strawberries embraced many fine collections. The best six, selected from about fifty sorts from Ellwanger & Barry, were Wilson's, Victoria, Triomphe de Gand, Genesee, Brighton Pine and Scott's Seedling. A dish of Triomphe de Gand, from H. E. Hooker & Co., took the first prize for a single variety. This variety is rapidly growing into favor for its great size, fine quality, hardiness and productiveness.

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☞ The Boston Cultivator mentions the importation by Mr. HOWARD of a Kerry bull and two Kerry heifers for Mr. A. W. Austin, also of "a noted steeple chasing mare" for a gentleman of that city, and eight superior Cotswold sheep from Mr. Read of Cirencester, as follows: one ram and two ewes for D. B. Hinman, Esq., of Westchester, Pa., one ram and two ewes for Richards Bradley, Esq., of Brattleboro', Vt., and two ewes for Albert Fearing, Esq., of Hingham, Mass.

☞ E. CORNELL, Esq., of Ithaca, has lately returned from Kentucky, with a number of Short-Horns selected during his visit in that State—including three heifers of Mr. ALEXANDER's breeding, five bred by Mr. JOHN CURD of Lexington, and one bred by the Messrs. WARFIELDS. They will prove a valuable addition to the Improved Stock of that part of the State.

◆

FINE CHERRIES.—We are under obligations to Prof. JAMES HALL of this city, for a basket of very large and fine cherries, from his garden at Hall's Place, where he has proved himself a most skillful fruit-culturist. Among them, were superior specimens of Elton, Napoleon Bigarreau, Knight's Early Black, Wendell, White Bigarreau, and Coe's Transparent.

☞ We acknowledge a fine lot of mammoth Black Raspberries, raised by Mr. H. H. Doolittle of Oaks Corners, Ontario Co., through Messrs. Wollenman & Lochner of this city.

☞ Our friend JOHN WILSON, of the Albany Nursery, sends us an excellent sample of Brinckle's Orange Raspberry.

◆

THE SYRIAN GRAPE.—It will perhaps be news to some of your readers, to hear that the Palestine or Syrian grape ripened in the open air at Lynchburg, in this State, last year, bearing bunches three feet in length and twelve or fifteen inches broad. I procured a vine one year old last fall, which has stood the winter without any protection, and is now making a tolerable good growth.

Mont. Co., Va. J R. GARDNER.

☞ As the time approaches of our usual Autumn Exhibitions, it is proper to remind the reader, in a word or two, of the good Ends they are intended to subserve, and to urge a more general Support of their Agricultural Societies upon our Farmers at large.

The truth is, that it is not the individual efforts of any board of Officers, nor the local contributions of any single District, that can render a Society or its Shows in the highest degree successful. The whole Region embraced under its constitution, whether it be Town or County or State, must be actively interested, and no single village or towns or counties should be left with the whole responsibility of its support. Farmers often nearly or quite neglect the meetings and the affairs of their Societies, and then complain that their localities have been slighted or their own interests not looked after. If their voices had been present to share in the Counsel, temperately advocating for themselves no more than they were willing in turn to accord to others, the Result would probably have been different—common Co-operation and common Forbearance, an earnest and perhaps sometimes an apparently self-sacrificing Activity, are essentials, upon the importance of which we fear a Sermon might be advantageously preached before half the County Organizations in the State.

We do not propose to undertake the task at present, however—having merely thrown out these hints, in order to add, that, with this general Support extended to our Societies, they will become with each recurring year a more efficient Agency in promoting the material interests of those who labor thus earnestly in carrying them on—not only in a general point of view increasing the weight and power of the name of Farmer, but also, through channels more direct, raising the standard of his Practice, promoting the improvement of his Stock, the adornment of his Grounds with Fruits and Flowers, and the attractiveness of his Home for those who are growing up—either to cling to, or abandon his pursuit, according to the kind of Example he sets them in following it.

With the Prosperity which now seems in a greater degree than usual, to be promised to the Farmers of the Country, we trust they will be prepared to join with more zeal in the management of the coming Exhibitions of their Societies. So far as we learn of the present condition of Societies in this State, their Autumn Shows bid fair to meet with at least the customary degree of success—Let old jealousies, if there are any, be laid aside, and new exertions put forth, to render them worthy of the Agriculture of New-York and the Energy of her population.

☞ We have received from Messrs. Blymyers, Bates & Day, of Mansfield, Ohio, a sample of Sorghum Sugar, made by Mr. O. N. Brainerd of Marion, Iowa, from Green Cane, upon "Cook's Improved Portable Sugar Evaporator." This valuable invention is now manufactured by the above Firm, whose Advertisement will be found in another column. The sugar sustains the opinion of its quality therein expressed.

More Seeds.—The Washington correspondent of a New-York paper writes that the "Commissioner of Patents, Gov. Thomas, desiring to infuse new life into the Agricultural department of his office, has sent out Col. Clemson to Europe to purchase good seeds suited to our climate and wants. That gentleman has large practical experience and ability as an agriculturist. Wheats, Italian barleys, &c., are to be special objects of acquirement. New and valuable seeds and plants are also to be obtained at any cost consistent with the appropriation of $60,000."

☞ The New-Jersey State Fair takes place this year at Elizabeth, Sept. 4–7. The Premium List is issued and may be had, we presume, by application to W. M. Force, Secretary, Trenton. President, N. N. Halsted of Harrison; Treasurer, C. M. Saxton of Orange.

☞ The next show of the Clinton Co. Ag. Society is to take place at the Cumberland Park, Plattsburgh, Sept. 10 and 11—President, Hon. P. G. Ellsworth; Secretary, W. H. Bailey.

The Apple Insect.—Mr. Weir of Lacon, Ill., has favored me with specimens of the apple insect spoken of by him in the Country Gentleman of May 31st. It is the largest species of the weevil kind which we have in our country, and is the New-York weevil, (*Ithycerus Novaboracensis*,) thus named by Forster in the year 1771, other names having since been given it by other writers who were unaware it had already been described. It however is a very rare insect in our State at the present day.

Asa Fitch.

Machinery in Farming.—The most laborious part of farming operations is now rendered, through the improvements in machinery, a pleasant pastime; instead of scouring the neighborhood, as formerly, for able-bodied laborors to cut grain and grass, the proprietor of a farm can ride on eliptics, and driving his favorite team, cut his whole crop in a very short time. The hay is gathered into winrow in the same pleasant manner, with the independdent horse tooth rake, provided with a seat for the driver —and with "Jarrett's Patent Self-Unloading and Adjusting Hay Elevator" it is carried into the mow, however high, by horse power. This improvement in the hay fork will effect a great saving of time and labor in unloading hay, being so constructed as to require no attention from the person managing it, either in tripping the fork or adiusting it again for another load, both being perfectly done by the operation of the elevator itself. W. P.

New-Jersey.

☞ We note a current rumor that the time of the United States Agricultural Exhibition at Cincinnati, is to be from Sept. 12 to the 20th. Moreover that "no cattle will be received, on account of pleuro-pneumonia, but large premiums will be offered for horses, machinery, steam fire engines, etc."

☞ The Tennessee State Fair, this year, takes place at Nashville, opening Sept. 10th. The Programme offered is a liberal one, and a special invitation is extended to competitors from other States, as will be seen from the Advertisement published in another column, to which we call the attention of Manufacturers and all interested in exhibitions of the kind.

☞ The Illinois State Ag. Society has issued its circular announcing $15,000 in Premiums. Fair at Jacksonville, Sept. 10–14—President, Lewis Ellsworth, of Naperville; Secretary, John Cook, of Springfield.

☞ The State Board of Agriculture of Indiana are to hold their Show for 1860 at Indianapolis, Oct. 15–20, with a prize list amounting to $12,000, "open to the world"—President, G. D. Wagner; Secretary, W. T. Dennis.

☞ The St. Louis Ag. and Mech. Association are ready with another schedule of premiums amounting, they say, to over $20,000. The Show opens Sept. 24, and continues during the week—President, Andrew Harper; Secretary, G. O. Kalb.

☞ The Premium List is now ready for the Fifth Exhibition of the Kentucky State Ag. Society at Bowling Green, Sept. 18–22. It is judiciously arranged and liberal in its offers. President, Col. L. J. Bradford, of Augusta; Secretary, R. W. Scott, Frankfort.

☞ The Second Fair of the Sanilac Co. (Mich.) Ag. Society will be held at Lexington, Sept. 27, 28—President, John Sheldon; Secretary, Charles Waterbury.

☞ The Rock Island Co.. (Ill.) Ag. Society's Fair takes place at the city of that name Sept. 19–21—President, Ben Harper; Secretary, D. F. Kinney.

☞ The Ulster Co., (N. Y.) Ag. Society, holds its Fair at Kingston, Sept. 26–28—President, C. L. Kiersted; Secretaries, S. Frame and B. B. Hoornbeck.

☞ A Society has been organized at Milwaukee, called the "Wisconsin Agricultural and Mechanical Association," based upon the same plan as that which has been so successful at St. Louis. Seventeen citizens have already subscribed $7,000, and the Fairs are to be held at the Cold Springs, two miles west of the city—President, Dr. E. B. Wolcott; Secretary, J. A. Lapham. Hon. W. D. McIndoe is mentioned as one of the prime movers in the undertaking.

Tall Cabbage.—A Sonora (California) paper gives the following account of an immense cabbage plant now growing in the garden of Mr. Bennett, formerly of this city, but now a resident at that place:—"It has already attained the enormous height of eight feet. The stalk is about the size of a man's wrist, and stretches up four feet before it exhibits any leaves or branches. It is more than one year old, and Mr. B. thinks as it is of the evergreen family, that it could be profitably cultivated for shade and ornamental purposes. The most interesting fact connected with this remarkable vegetable is, that an appreciating sparrow has built her nest among its branches, which already contains three little eggs. Her tedious process of incubation will soon be rewarded by a callow brood, to enliven her home amongst the swaying branches of the old cabbage tree."

☞ J. H. **Klippart**, Secretary of the Ohio State Board of Agriculture has sent us copies of the Premium List and regulations for the State Show which is set down for Sept. 25—28, at Dayton. Competition at the Ohio Fairs is open to other States—if anybody has what is better than the Buckeyes can produce, they wish to convince themselves of the fact. Hence outsiders are always welcome as exhibitors, and may carry away whatever prizes they can win. Indiana and Kentucky, particularly, this year should "make a note" of these facts.

☞ **Franklin County** is to hold its next Fair at Malone, on the 11th to 14th of September. The address will be delivered by Horace Greeley on the 13th, at 1 o'clock, P. M. The premium List has been greatly increased, the show grounds enlarged and beautified, a half-mile track prepared, and vigorous efforts are being made to make the exhibition all that it is desirable a County Fair should be. A. Lindsay, Esq., is the President, and Smith Palmer, Secretary.

☞ The First Annual Exhibition of the Breckenridge County (Kansas,) Agricultural and Mechanical Society is announced for the present season at Emporia—President, R. H. Abraham; Secretary, P. B. Maxon. Like many of the most successful Societies in older regions, the Premiums offered will be chiefly made up of Agricultural Papers.

☞ A Horticultural Society in apparently prosperous condition, exists at St. Paul, Minnesota, and we have received, too late for earlier notice, their schedule of prizes awarded at an exhibition announced for the 4th instant. Alex. Buchanan, President; S. Hewson and M. Ford, Secretaries. We trust the Show went off finely.

☞ The Tenth Annual Fair of the Gallia County, Ohio, Agricultural Society, is to be held at Gallipolis, Sept. 11th and 12th. President, Augustus S. Guthrie; Secretary, J. L. Vance; Treasurer, J. C. Neal. Much obliged for the compliments to our journals in the Premium List.

☞ The Show of the Jackson Co. (Mo.) Ag. Society, is put down for Sept. 4–9, at Independence City. B. F. Thompson, President; Schuyler Lowe, Secretary.

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A HINT TO ORCHARDISTS.

Throughout a large portion of the country, as all are aware, a part of the limbs of apple orchards are found dead, more especially towards the extremities, and generally believed to be the effect of some of the past severe winters. Many trees are recovering, becoming more vigorous, and bearing, but the dead limbs remain. These dead branches now need pruning out; and we are not sure that an advantage may not result to the trees from this disaster, by teaching many orchardists to prune better than they ever have done. The general and erroneous propensity is to *trim upwards*,—to thin out and cut off all below, but a few main limbs which are thus converted to bare and crooked poles, supporting the foliage and crops on their extreme upper ends. Instead of this absurd course, the heads should be thinned out above, and the growing part brought down nearer the centre of the tree. As the tendency of growth is to lengthen the arms, so the tendency of pruning should be to shorten these arms again, so as to keep the head in a reasonably compact and handsome form. Cutting out the dead ends of the limbs will in many instances exactly accomplish this purpose. Now, at midsummer, is the best time to do it.

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[For the Country Gentleman and Cultivator.]

ON CURRANT WINE MAKING, &c.

In answer to A. R. of Troy, C. B. H. of Buffalo, and others who have written me on this subject, I have to state that I do not know any who have plantations of currants on a large scale, although there is no doubt there are many in different parts of the country who cultivate them extensively. I neither know of any especial work published on the manufacture of wine from currants. The best receipt I know, and which I have used in making it, will be found in the **Country Gentleman** for June 28 of this year, by another correspondent—viz., one part of the juice of the currant, three pounds of best refined sugar, and as much water as to make one gallon; put the whole in a cask, and roll it to dissolve the sugar. Put it under cover to ferment, either in a vat or in the cask that is to hold it; when the fermentation is over bung it, and stow it in a cool cellar, when it is ready for use or shipment. The receipt given in no. of 28th June, is practically the same.

The only market I know for the disposal of the wine, is at the South and the West Indies, as also in the neighborhoods where it is made, most families using it there. Consignments can be made either to Mobile, New-Orleans, San Augustine, Pensacola, &c., and the West Indies generally. About forty or fifty years ago there existed a currant yard near Providence, R. I., producing from 800 to 1,200 gallons of currant wine per acre, which was then chiefly exported to and sold in the West Indies. F. A. Nauts. *New-York, July* 12, 1860.

COOK'S PORTABLE SUGAR EVAPORATOR,
For Making Sorghum Sugar.
The most Rapid Evaporator in the World!
DISPENSES WITH CLARIFYING AGENTS, AND
IS A PERFECT SELF DEFECATOR.

Is the only one which removes certain gummy matters which would otherwise prevent granulation, and hence is
The only Machine which makes Sorghum Sugar successfully!

It is simple, portable, takes but little fuel, and never fails to give perfect satisfaction.

Prices, &c., of Evaporator.
No. 2—Pan 45 by 72 inch. galvanized iron, $45; same size copper, $65.
No. 3—Pan 45 by 90 do. do. 55; do. do. 75.
No. 4—Pan 45 by 108 do. do. 65; do. do. 85.
WEIGHT WITHOUT BRICK. CAPACITY FOR BOILING GOOD CANE, JUICE.
No. 2—245 pounds. No. 2—about 2 barrels per hour.
No. 3—280 pounds. No. 3—about 3 barrels per hour.
No. 4—330 pounds. No. 4—about 4 barrels per hour.

"Operates admirably."—American Agriculturist.
"Entire success."—Cleveland Plaindealer.
"Very valuable invention."—Scientific American.
"Makes actual veritable sugar."—N. Y. Tribune.
"The most successful."—Ohio Cultivator.
"Working wonders."—Milwaukie Democrat.

The following are the names of a few of the many who have made this "actual, veritable sugar," equal in appearance and flavor to the best New Orleans.

H. Mansfield, Lexington, O.; Enoch Payne, Springfield, Ill.; O. N. Brainard, Marion, Iowa; Isaac Karsner, Florida, O.; J. Q. Beattie, Defiance, O.; John Richards, Tecumseh, Mich.; John Reed, Mansfield, O.; W. Corothers, Lexington, O.; E. S. Raker, Locust Corner, Ohio, &c., &c.

☞ Send for Circular to BLYMYERS, BATES & DAY,
July 26—w&mtf. Mansfield, Ohio.

GRAPE ROOTS.—Our stock of Grape roots will exceed 500,000. Prices as follows:
Catawba, one year old, ... $15.00 per 1000
" two year old, ... 25.00 "
Isabella, one year old, ... 25.00 "
Diana, one year old, ... 25.00 per 100
Liberal discount to dealers. J. M. McCULLOUGH & SON,
July 26—w17t. 200 Main St., Cincinnati, Ohio,

FARM AND RESIDENCE FOR SALE

At Madison Morris Co., N. J.

The subscriber offers for sale his residence, consisting of 164 acres of land, with fine improvements, including a spacious Mansion House, grapery, fruit of all kinds, commodious barns and farm buildings, tenent houses, &c. Morris county is celebrated for the favorable effects of its climate upon consumptives or those troubled with bronchial affections. This property is an attractive one to a gentleman of means. Madison is distant 1 hour and 20 minutes from New-York city, by Morris and Essex Railroad. For particulars address the owner, ALFRED M. TREDWELL, 45 Fulton-st., New-York City.

THOROUGH BRED NORTH DEVON AND AYRSHIRE CATTLE.

In consequence of above, I offer for sale, in lots to suit purchasers, my entire stock of Thorough Bred Cattle, at reduced prices. For particulars address as above. July 19—w4tm1t.

EMERYS' PATENT COTTON GIN,

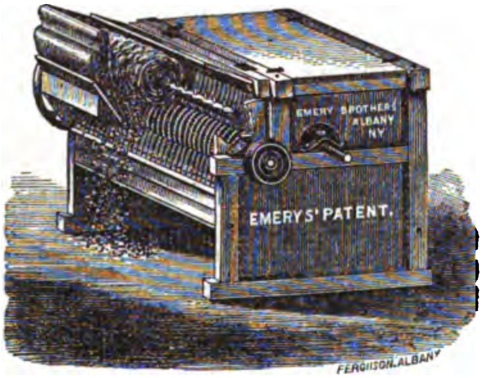
MANUFACTURED BY

EMERY BROTHERS,

PROPRIETORS OF THE

ALBANY AGRICULTURAL WORKS,

ALBANY, N. Y.



The Cotton Gin is one of the most important among modern inventions and any improvements in it, or its operations, are, as they should be, eagerly sought for by the cotton producer. The enormous amount of cotton, and its great value, which is annually made in this country, causes even the smallest improvement in its manipulation to command a ready adoption; and the numerous inventions and patents granted therefor since the introduction of Whitney's Saw Cotton Gin, go far to attest the great necessity and inducements for improvements. It is believed by the makers, who are familiar with previous efforts and patents, that their own improvements are among the most valuable since Whitney's time, and that they are chiefly in a different direction from nearly all other inventors, and which have been overlooked by them. One of the best points in their improvement is that it is applicable to all saw gins now in use, as well as those being manufactured by the proprietors, while it is both simply and cheaply applied. The improvement consists chiefly of a central cylinder shaft of wood or other light material, so suspended within the hopper, upon its journals at both ends, as to occupy the hollow space within the cotton roll in the hopper, which is produced by the centrifugal force of the revolving mass.

This shaft is thickly studded throughout its surface with radially projecting pointed pins, which become imbedded in the cotton, causing the shaft to revolve in unison with the roll by the force and motion which the cotton receives from the action of the saws upon it.

Its purposes and objects are to produce a uniform motion of the roll throughout its whole length and circumference, and to support the seed cotton and prevent that portion which is presented to the action of the saws from being compressed by the weight of the cotton roll upon the saws; also to avoid the consequent cutting and napping of the lint which would be caused thereby. Its use produces a constant motion of the roll positively relative to that of the saws, and preserves its cylindrical form, irrespective of the different and varying velocities of the saws, or the centrifugal force of the revolving mass in the hopper.

This shaft, with its pins, prevents all choking, clogging, bridging and breaking of the cotton roll from careless feeding or matted condition of the seed cotton, as the positive and forcible motion produced by the action of the saws upon that portion of the seed cotton roll lying between the saws and the shaft and communicated through it and its pins to the whole roll, is sufficient to overcome all such irregularities, as also to admit of the gin being worked up to the maximum power applied, be it more or less, without danger of stopping the operation of the gin or injuring the quality of the lint. It also enables the gin to be worked with almost any power, and at any velocity, with uniform results; consequently increasing the capacity for work in like proportion.

The proprietors have also completed their attachment for the gin, which enables the whole to be operated upon the field, if desired, and without any lint room or gin house being required, and also for cleansing the lint from all dust and sand, delivering it at one and the same operation in fit condition for baling and the market. The attention of cotton growers and dealers in like kinds of machinery is called to them. The prices of the gins and condensers are as follows:

The 45 Saw Gin with improvement,	$110.00
" " without improvement,	90.00
The Cotton Duster and Condenser for same,	90.00
For each additional Saw,	2.50
For larger Duster and Condenser for each extra saw,.	1.00

All orders addressed to the manufacturers will receive prompt attention. EMERY BROTHERS, 62 & 64 State-st., Albany, N. Y.

July 26—w&m1t.

THOROUGH-BRED AYRSHIRES AND NORTH DEVONS FOR SALE.

The undersigned having offered his residence for sale, will dispose of his entire stock of Thorough-Bred Cattle at reduced rates, in lots to suit purchasers. There are several animals of great merit in this herd, which are only rarely to be secured. Will also sell his stock of Horses and Colts, including three of the best Stallions of their age that can be shown. For particulars address

ALFRED M. TREDWELL,
Madison, Morris Co., New-Jersey,
or 45 Fulton-st., New-York City.

June 28—w4tm2t.

ALL KINDS OF AGRICULTURAL BOOKS.

Farmers, Gardeners, Nurserymen, Fruit-growers, Dairymen, Cattle Dealers, and all persons interested in tilling the soil or adorning their grounds and dwellings, will be supplied with the most complete assortment of Books relating to their business that can be found in the world, by

C. M. SAXTON, BARKER & CO.,
Agricultural Booksellers and Publishers of the Horticulturist.
No. 25 Park Row, New-York.

☞ Catalogues gratis. Books sent by mail. AGENTS WANTED.

Mar 15—w15tm3t

LAWTON BLACKBERRY.—To obtain the original variety for field or garden culture, address

WM. LAWTON, New Rochelle, N. Y.

☞ Circulars, with ample directions, will be forwarded to all applicants, free. Aug. 1—m12t.

ALBANY TILE WORKS,

CORNER CLINTON AVENUE AND KNOX STREET, ALBANY, N. Y.

The Subscribers, being the most extensive manufacturers of DRAINING TILE in the United States, have on hand, in large or small quantities, for Land Draining, ROUND, SOLE and HORSE-SHOE TILE, warranted superior to any made in this country, hard-burned, and over one foot in length. Orders solicited. Price List sent on application.

C. & W. McCAMMON,
Albany, N. Y.

Jan. 5—wtf.—Feb 1—mtf.

I. T. GRANT'S PATENT DOUBLE BLAST FAN MILLS.

They will chaff and screen wheat in passing through the mill once, in the most perfect manner, and all kinds of grain and seed. Warranted the very best in use.

Patent Rights for sale of all the Western States.

Address I. T. GRANT & CO.,
Junction, Rensselaer Co., N. Y.

May 1—m12t

INVENTION TRIUMPHANT!

The Cost of Draining Reduced One-Half

BY THE USE OF

CALLANAN'S DITCH DIGGER AND SUBSOILER.

PRICE, with wheels, axle-tree and reversable tongues, $50. Satisfaction warranted. Also SHOVELS, made expressly to be used in connection with the Ditcher—just the thing—Price $1.50.

Address D. CALLANAN
Callanan's Corners, Albany Co., N. Y.

June 21—w18tm8t*

STEEL PLOWS.—We are manufacturing for the spring trade large numbers of our Mohawk Valley Clipper Plows with steel mold-board and land-side, with steel or cast point, as desired, and would refer you to the following persons, who have them in use:

John Johnston, Geneva, N. Y.
J. Ingersoll, Ilion, N. Y.
Wm. Summer, Pomaria, S. C.
R. C. Ellis, Lyons, N. Y.
Col. A. J. Summer, Long Swamp, Florida.
A. J. Bowman, Utica, N. Y.
A. Bradley, Mankato, Minesota.
F. Mackie, Utica, N. Y.

We are also manufacturing Sayre's Patent Horse Hoe and Potato Covering Machine, Sayre's Patent Cultivator Teeth in quantities for the trade; and all kinds of steel and swage work in the agricultural line. Send for a circular, SAYRE & REMINGTON.

Jan. 26—wtf Mar. 1—mtf. Union Agricultural Works, Utica, N. Y.

IMPROVED SHORT-HORN CATTLE.

The subscriber, desirous of reducing his herd in numbers, offers for sale at moderate prices,

BULLS, COWS AND CALVES

Of excellent quality, with good Pedigrees.

On application by mail a Catalogue will be sent with

Pedigree and Price of each Animal offered for Sale.

Address by mail, at Rhinebeck, N. Y.,

WILLIAM KELLY
Ellerslie Farm, one mile
South of Rhinebeck Station, Hudson River Railroad.

June 7—w7t.

PURE BRED STOCK FOR SALE.

Pure Bred Durham Cattle at $75 to $250. Spanish Merino and French Merino sheep at $10 to $30. Improved white pigs, $8 each. Madagascar rabbits at $10 per pair. Brood mares, served by "Bush Messenger," at $125 to $300. Black Hawk, Morgan, Bashaw and Messenger Stallions, from six months old up to full grown and trained animals, at $75 to $600.

All animals sold will be carefully boxed or haltered, and placed at the Express Office.

My residence is 4½ miles east of Brownsville, Fayette county, Pa. Post Office Box No. 6. May 10—wtf. JOHN S GOE.

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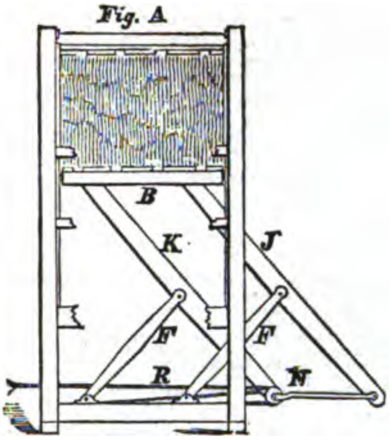

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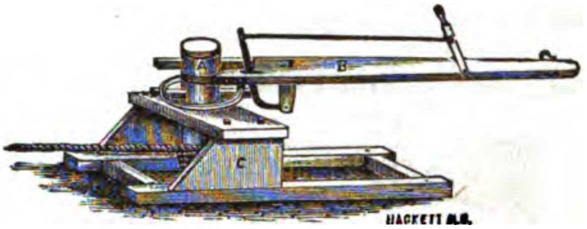
PROPRIETORS AND MANUFACTURERS OF

Dederick's Paralle Lever Hay Press,

AND

PHILIPS' PATENT CAPSTAN.



THIS PARALLEL LEVER HAY PRESS, so well known and so justly celebrated, has been greatly improved during the last year, and as now manufactured and sold defies all competition. It has been awarded the first premium by the N. Y. State Agricultural Society, for six successive years, and by the U. S. Agricultural Society in 1857 and 1859, or every time it was exhibited. It is made in different sizes, for hand or horse power, at prices varying from $65 to $165. As a horse press it has no equal. As a hand press it exceeds beyond description any and all hand presses yet invented.

Philip's Patent Capstan, (by which the danger and tedious operation of the common capstan is entirely obviated, as well as much time saved,) is furnished with the above horse presses if desired, or separately for horse presses of every kind. All the advantages of this Capstan will be readily understood, when it is known that the horse is not removed from the sweep to lower down the press. For particulars address the subscriber, or the patentee, Peter Philip, Hudson, N, Y.

N. B. Irons, &c., for Stationary Presses and Capstans, for sale. Agents wanted in every State to introduce and sell them.

I have finished portable horse presses, as well as hand presses, constantly on hand, and can furnish the trade, or will fill orders direct. Circulars containing sizes, prices, &c., sent free on application.

Address LEVI DEDERICK & CO.,
July 5—w&m1t. Albany. N. Y,

SELECT TURNIP SEED.—

B. K. BLISS, Springfield, Mass.

The following varieties have been grown with much care, from selected roots, and can be confidently recommended to those who desire a reliable article.

	Cts. per lb.
Early White Flat Dutch,	75
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White, do. do.	50
Extra White Flat, (very superior,)	75
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A liberal discount to dealers. A Descriptive Catalogue of Seeds will be mailed to all applicants enclosing a postage stamp.

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July 19—w3t. Springfield, Mass.

STRAWBERRIES! STRAWBERRIES!!

As the season for planting out beds of Strawberries again returns, one naturally asks himself the question, what variety shall I plant? Our answer in all cases is, "Wilson's Albany." Price of plants per 100, $1; per 1000, $8. A liberal discount to the trade. Packing, for which no charge is make, guaranteed extra. Send your orders for the same to the Albany Nursery of JOHN WILSON,
July 12—w12t. Albany, N. Y.

TRUE DELAWARE GRAPEVINES—also, Logan, Rebecca, Diana, Concord, Hartford Prolific, Union Village, Anna, Clara, and other new varieties. Wilson's Albany Strawberry, Kirtland Raspberry, &c. GEORGE W. CAMPBELL,
Dec. 15—w9mos. Delaware, Ohio

SPANISH MERINO SHEEP.—N. & N. Bottum, Breeders of pure blood Atwood Sheep, of the Hammond stock.
Jan. 26—w1yr. Shaftsbury, Vt.

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I have for sale a number of volumes of the FRUIT AND INSECTS of the STATE NATURAL HISTORY, with colored plates and descriptive letter press. Will be sold low to early applicants.

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They are so improved as to be taken down and packed in boxes for transportation. One dozen can be packed in a box of about six cubic feet. We also make the Grapevine Cradle. All of the above are made of the best material and workmanship. For Price List, address

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HORSE POWERS AND THRESHING MACHINES for sale by A. LONGETT,
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ELEGANT ROSEWOOD CASES!

GOOD AND DURABLE!

WARRANTED!

Send for Circulars, giving full description.

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ALBANY, N. Y.
Ap 5—w&mtf

THE FRENCH RASPBERRY FOR SALE at $5 per 100; $40 per 1000; $150 per 5,000; needs no winter protection, and bears two annual crops of fruit. Isabella Grapevines, one to two years old, $5 per $100; $40 per 1000; two to three years old, $10 per 100; $75 per 1000: three to four years, $15 per 100: $125 per 1000. Exchanges for Pear Stocks, if desired, will be made.

Fruit and Ornamental Trees, Shrubs and Plants in general.

RICHARD M. CONKLIN,
Sept. 29—wtf. Evergreen Nursery, Cold Spring Harbor, L. I.

NORTH DEVON CATTLE.—Bulls, Bull Calves, Heifers and Heifer Calves for sale, with good pedigrees, sired by my prize bull Empire. JOSEPH HILTON,
May 17—wtf. New Scotland, Albany Co., N. Y.

JOHN T. ANDREW, West Cornwall, Ct.,

FACTOR IN IMPROVED STOCK,

Breeder of DEVON CATTLE, NEW-OXFORDSHIRE SHEEP, &c.
Feb. 16—wtf

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BLOOMINGTON NURSERY, ILL.

Wilson's Albany Strawberry, Large Early Scarlet, Crimson Cone and other good sorts, pure, 100 plants packed, $1; 1000, $5. Tulips now ready, 300 named sorts, 100 strong roots, double and single, of 20 fine named sorts, $4; 12 roots of 12 named sorts, 50c. to $2. Mixed Tulips, $1, 1.50 and 25c. per dozen. Hyacinths, choice named, $2 per dozen, mixed $1 per dozen, with a general assortment of bulbs, fruit and ornamental trees. F. K. PHŒNIX.

July 26—w13t.

CIDER PRESS SCREWS—5 feet long, 4 inches in diameter. These powerful screws bring out a third more juice than the portable presses. Made by

L. M. ARNOLD.
June 28—weow3t. Poughkeepsie, N. Y. Foundry.

PUBLIC SALE of PURE BRED SHORT-HORN
AND
North Devon Cattle;
Brood Mares, Colts and Stallions;
Berkshire, Essex and Suffolk Swine,
And a small flock of South Down Sheep.

"THE ALBANY COUNTY BREEDING ASSOCIATION," will sell at Public Auction at the "Log Tavern Farms," on the New-Scotland Plank Road, two miles from Albany, N. Y., on Wednesday, September, 12th, 1860, at 12 o'clock, M., a select and large herd of SHORT-HORN Cows, Heifers, Young Bulls, and Calves; including "Minna," by imported Duke of Gloster (11382,) and the imported cows Flattery, bred by Earl Ducie, and got by 4th Duke of York, (10167;) Bloom, bred by Mr. Fowle, and imported by Col. L. G. Morris; Finella, bred by S. E. Bolden, Esq., and imported by Mr. Alexander, got by Grand Duke, (10284,) and her calves by imported Sirius and imported Neptune—also imported Neptune 8192, (11847,) and several Bull and Heifer calves of Neptune's get.

NORTH DEVON Cows, Bulls and Calves, mostly bred from imported stock, including the celebrated prize bull Empire (494,) and his get.

TWENTY BROOD MARES, of the BLACK HAWK and MESSENGER breed, including the celebrated Black Hawk Maid, by the original Vermont Black Hawk; "Rose Allen," by "Ethan Allen," and others sired by Black Hawk, Messenger and English Stallions.

Also 13 spring colts, 13 yearling colts, 16 two years and three years old, nearly all of which were sired by the noted trotting stallions "Black Murat," George W. Adams' English Horse "American," "Henry Clay," "Logan," "Gray Messenger," "Ethan Allen" The Spirit of the Times, Chevalier the Black Hawk, Gray Prince, the sire of General Darcy, and Addison, who was sold for the sum of $5000.

The proprietors have been many years engaged in breeding the FAST TROTTING HORSE, and they flatter themselves that there has never been offered to the public for sale, at any one time, such a numerous and desirable stock as can be found named in the Catalogue. Sale positive, without regard to weather.

Terms.—Good notes at four months, without interest.

Catalogues now in press, and will be mailed by applying by letter or otherwise, to either of the undersigned, or to R. H. BINGHAM, 48 Steuben Street, Albany, N. Y.

Carriages will run hourly from the Stanwix Hall.

WILLIAM M. BULLOCK, Bethlehem, near Albany.
JOSEPH HILTON, New-Scotland.
WILLIAM H. SLINGERLAND, Norman's Kill.
WILLIAM HURST, Albany, N. Y.
GEO. W. ADAMS, Whitehall, N. Y.,
Albany, July 26—w6m1t. Breeders and Managers.

PREMIUM STRAWBERRIES.

WM. R. PRINCE & CO., Flushing, N. Y., offer the following. When very large quantites are wanted, the price can be fixed by negotiation. The following $1 per 100, $5 to $7 per 1,000. Alpine Wood, (red and white,) Boston Pine, Burr's Pine, Crimson Cone, Early May, Early Scarlet, Genesee, Hooker, Hovey, Hudson, Iowa, McAvoy's Superior, McAvoy's No. 1, Moyamensing, Orange Prolific, Peabody's Prolific Hautbois, Rival Hudson, Scarlet Cone, Walker, Wilson's Albany, $6 per 1,000. These, $1.50 per 100, $7½ to $10 per 1,000,—Alpine Monthly, (red and white,) Bicton Pine, Baltimore, Bridgetown Pine, Charles' Favorite, Durfee's Seedling, Imperial Scarlet, Jennie Lind, Jessie Read, Longworth's Prolific, May Queen, Omer Pascha, Read's No. 1, and Gold Seed, and Black Pine, Primate, River's Eliza Seedling, Prince's Scarlet, Magnate. $7½ per 1,000, Scarlet Melting, Trollope's Victoria, Triomphe de Gand, Vicomtesse Hericart, Western Queen. These, $3 per 100—Boyden's Mammoth, Cutter's Seedling, Cornucopia, Diadem, Eclipse, Globose Scarlet, Le Baron, Ladies' Pine, LaReine, Malvina, Myatt's Prolific, Montreuil, Sir Harry, Stewart, Triumphant, Scarlet, Voorhis, Ward's Favorite. The following by the dozen—Austin's Seedling $3; Fillmore, Randolph Pine, Prince's Scarlet Climax, Prince's Excelsior, $2. These $1—Bartlett, Chorlton Prolific, Downer's Prolific, Elizabeth, Ladies' Finger. These $1.50 per dozen—Minerva, Perfumed Pine, Prince's Globose, Fortunatus, Florence, Fragrant Scarlet, Hermine, Seraphine, Scarlet Prize, Victorine, Waverly, Oscar, La Constante, Wonderful, Duc de Malakoff, Nicholson's May Queen, Bonte de St. Julien.

N. B. Many other varieties are for sale, and are described in our Catalogues.

Rejected.—Black Prince, Cushing, Brighton Pine, Jenney's Seedling, Climax Scarlet, Bishop's Orange, Dundee, Harlaem Orange, Monroe Scarlet, Marylandica, Pennsylvanica, Kitley's Goliath, Rival Hudson, Scarlet Cone, Scott's Seedling.

In our New Descriptive Catalogue we offer 160 varieties, including all the new varieties. July 26—w&m1t.

HORSE POWERS, THRESHERS AND CLEANERS.

PLEASE LOOK BEFORE YOU LEAP!!

I am at present manufacturing and prepared to supply a necessarily limited number of the very best

THRESHER AND CLEANER

extant. Just look at the advantages that I have over others, any one of which is sufficient to induce you to buy, if you wish to be suited to a dot. The whole machinery is driven by a single band, and consequently less power is taken to drive it. The cylinder and concave is wider than other two horse machines, enabling more grain to be threshed in a given time. The separator is much wider than the cylinder, so that plenty of room is given for the straw and grain to spread and separate thoroughly, and no grain is carried over. The separation is also more fully insured by means of forks which raise and lower at every vibration of the straw carrier, keeping the straw in constant agitation. The shoe containing the seives has the side shake of the common fan-mill, giving the grain a more thorough cleaning. Each machine is furnished with a dust spout, entirely relieving the feeder from the usual annoyance of dust. Those who have ever used a threshing machine, will appreciate this.

ORDERS MUST BE SENT IN EARLY if you wish to have them filled promptly.

ALL ARE WARRANTED.

Terms easy. Address CHAS. E. PEASE,
July 26—w2tm1t. Excelsior Ag. Works, Albany, N. Y.

GREAT CURIOSITY.—Particulars sent free.—Agents wanted. SHAW & CLARK, Biddeford, Maine.
July 26—w26t.

THE CULTIVATOR.

THIRD] TO IMPROVE THE SOIL AND THE MIND. [SERIES.

VOL. VIII. ALBANY, N. Y., SEPTEMBER, 1860. No. 9.

PUBLISHED BY LUTHER TUCKER & SON,
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J. J. THOMAS, ASSOCIATE EDITOR, UNION SPRINGS, N. Y.

AGENTS IN NEW-YORK:
C. M. SAXTON, BARKER & Co., Ag. Book Publishers, 25 Park Row.

THE CULTIVATOR has been published twenty-six years. A NEW SERIES was commenced in 1853, and the seven volumes for 1853, 4, 5, 6, 7, 8 and 9, can be furnished, bound and post-paid, at $1.00 each.

TERMS—FIFTY CENTS A YEAR.—Ten copies of the CULTIVATOR and Ten of the ANNUAL REGISTER OF RURAL AFFAIRS, with one of each free to the Agent, Five Dollars.

"THE COUNTRY GENTLEMAN," a weekly Agricultural Journal of 16 quarto pages, making two vols. yearly of 416 pages, at $2.00 per year, is issuedby the same publishers.

ORDER AND SYSTEM.

A well conducted Farm is a beautiful machine. We have seen a steam-engine of fifty horse power, that ran with such perfection that it could not be heard at a distance of twenty feet. We have heard some, much smaller, that gave out a mixed jargon of thumps, rattling of iron, and rushing of steam. At a celebrated trial of agricultural machines, there were two mowers—one could be heard nearly a mile;—the other scarcely more than a few rods, and the cutters went through the grass like a hot knife through butter. There were likewise two threshers—one was huge and ponderous, and when in motion trembled throughout, with a noise somewhat like thunder. The other, a two-horse tread machine, ran so perfectly that nothing could be heard at ten paces, but the tread of the horses' feet on the rolling platform, and the whistle of the grain and straw as they were shot from the cylinder.

It is precisely so with the machinery of a farm. If well conducted, every part will move on noiselessly but efficiently—all will be promptly done in its season, there will be no confusion, and a great deal will be accomplished. A badly managed farm, on the contrary, if not wholly neglected, will be hurry and disorder, with every thing out of joint, and very little will be done. The farm is a *complex* machine; and like all other machines made up of many parts, must be perfect at all times, or one small part will suspend the motion of all the rest. A broken cog, a missing bolt, or a bent axle, will derange the whole.

To come somewhat to particulars: The farmer must know at the start what he is going to do. His yearly operations must be distinctly before him. It will not be profitable for him to stop, and consider, and plan, after a piece of work is partly executed. He must begin at the beginning—must have his fields well laid out—his rotation digested—and the extent of each crop prescribed. If he is a practical farmer, he will of course know how much time will be required for the preparation of the land, sowing, cultivating, and harvesting each crop,—to which estimates he should add at least two-fifths for the interruptions of rainy weather and other contingencies. This will prevent him from undertaking too much, which is, next to laziness, the most fruitful cause of all bad farming; of hurried operations, and undestroyed weeds.

There are two great requisites in all successful husbandry,—to make the best use of all spare moments; and to be always ready in advance for every emergency. These two essentials work together, for by properly using the spare moment, ample preparation may be made. Slip-shod farmers are too much like the man with a leaky roof; in fine weather no repair was needed, and in rainy he could not do it. It may perhaps be laid down as a universal truth, that success in all enterprises depends on being able to predict beforehand what will be wanted. The need of a single tool in haying time, may result in arresting the labor of ten men, and in the loss of ten tons of hay by an approaching storm. The want of good implements of tillage may delay the sowing of a crop, till rains may postpone the operation a fortnight. "For want of a nail the shoe was lost, for want of a shoe the horse was lost."

A workshop with tools is indispensable for every farm. The owner should supply himself with a complete list of all implements. A place should be provided for every one, and every one should be in its place; and on every rainy or stormy day, an examination should be made and repairs promptly performed. Tools should be kept constantly in order, as a standing rule, and not be left broken till wanted for use. This is still more important, if they are to be sent to the village mechanic; for if taken in time the errand may cost much less than to wait till the moment required for actual use, and then to take a horse from a plow or from a hay wagon, to send three miles for a trifling but necessary repair.

In order to be able to accomplish farm labor promptly and in season, teams must be healthy and in the best working order. To be healthy, they should be fed with great regularity and uniformity, whether working or not, with good wholesome food and not with musty hay and grain or short pasturage. Their apartments must be clean and pure, and they themselves well curried. Some farmers lose much by giving their horses more work than they can perform comfortably—they are consequently worked too hard, enfeebled and made poor, and prematurely worn out. Not being supplied with sufficient animal force, favorable chances are lost and work allowed to accumulate, and increased labor will be required for its performance, and a waste result from delay. An extra working animal partly pays its way in manure, and sometimes its whole yearly keeping is returned in increased crops from early seeding and prompt cultivation.

Every farmer should carry a memorandum book. It is his compass and log-book combined. A page for each week, by way of assisting the memory, laying out every thing clearly before the eye, and for recording the numerous suggestions for future experiments, which must constantly occur in practice, would prove invaluable another year, and in ten years would develop an inexhaustible fund of facts.

◆

CARE OF SHEEP IN SUMMER.

It is not "good management," to say the least of it, to leave sheep to take care of themselves through the summer—merely giving the attention of washing and shearing. They need constant looking after—the eye and care at least of the owners, to see that they suffer no neglect during the grazing season. To make sheep husbandry profitable, the animals should always be thrifty and improving, and it requires no great expense, save in *attention*, to secure this important end.

"Sheep well wintered are half summered," is an old and very correct adage, for if the flock comes in good condition to a fair bit of grass from their winter yards, they will retain that state very easily. Ewes with lambs should have a better pasture than store sheep require, as the flow of milk and growth of the sheep, as well as the flesh of the dams, depend upon their being supplied with an abundant supply of nutritive herbage. If on red clover pasture, it should be in full supply, that it may not be eaten too closely; and the same is true of timothy. Blue grass, white clover, and the like, will bear shorter grazing without injury.

When shearing, the farmer should select out all the sheep he intends to dispose of during the year—the old ewes first, as well as all that are in any way defective in wool, form, or constitution. In this way a flock of ewes can be kept right, and looking right. We would never suffer a sheep to get old on the farm, unless it were a very choice breeding animal. These sheep should be given good pasturage, so that they may attain good marketable condition, and then find ready and profitable sale. We said, let the *farmer* select these at shearing time. No good sheep-keeper allows purchasers to pick from his flock—and at shearing he can judge most correctly of the age, character and value of his sheep, and mark or sort out at that time. At any rate, whenever he sells, let him make his own selection, and be sure and "weed out" his flock.

In selling wethers, various circumstances are to be taken into consideration. An old sheep farmer once gave us some rules on this subject, rules by which his practice was guided. If pasture was scarce, he would sell immediately after shearing. If pasture was plenty, and winter feed scarce, he would sell in the fall. Pasture and feed both abundant, he fattened for drovers or butchers in the early spring months, never keeping a wether over five years old, and seldom selling them under two years age. When good prices for lambs prevail, we may profitably sell wether lambs in the fall, especially if all our older sheep are of good character, and we desire only a small advance in number, such as the best ewe lambs will supply. But as a general rule, we should seek to "keep our flocks always composed of young, healthy and thrifty sheep. Better that old and inferior ones should be sold at half their value, than good, young, thrifty ones at a fair price."

Wheat harvest is now in progress, and it may be well to remark that sheep cannot safely be allowed to glean wheat-stubble, when there is danger of their getting much of this inflammatory grain. On oat or barley stubble they may fallow without danger, unless it be to the young clover, to which these and wheat fields are, or should be, generally seeded. Upland pastures are the best for sheep, though on lowlands, when dry, they may run without injury to themselves, and very generally to the improvement of the character of the herbage.

Lambs should be weaned at from sixteen to eighteen weeks old, and when separated, the ewes should be given short pasturage for a week or ten days, the better to dry off their milk. The lambs should have fair grazing—something new, like young clover, and if a few tame sheep are put with them they will be far less wild, and will learn to eat salt, and to follow the shepherd very readily. Lambs should not be placed where they will be frequently disturbed, save by the presence of some one to whom they are to become accustomed; quiet is best for sheep if we would have them orderly and always thriving.

We have said nothing of salting or watering sheep. The first we regard as occasionally beneficial—say once in ten days at first, and less frequently afterward. The last does not seem particularly necessary while heavy dews fall, and the pastures remain succulent. Our sheep seldom come to the spring for water at this season, though they could easily do so. A change of pasture occasionally is beneficial, and we would divide the time between sheep and cows, where we could conveniently do so, both for the benefit of the pasture and the animals themselves.

To conclude, we repeat that it is important to give sheep that care in summer, which will fully prepare them to endure, without loss, the rigors and deprivations of the winter season. This is the only profitable method of sheep husbandry, and it should be the golden rule of management, "Keep the flock always in thriving condition."

◆

LIME AND WHEAT.

GEORGE H. CHASE, an enterprising young farmer of Union Springs, N. Y., has tried an experiment the present season with salt, ashes, and lime, on wheat. An acre each was selected for the three experiments. About two barrels of salt were applied to one, two two-horse loads of ashes to a second, and a hundred bushels of lime to the third acre. The result has not been measured as yet, but the effects of each are very visible. The salt proved least useful; the ashes more so; and the lime most so of all. The line of superiority marking the boundaries of the limed portion was as distinct as a line fence. The increase of the crop by liming, over the portions not dressed with anything, is at least ten bushels per acre.

The question occurs whether a smaller quantity of lime would not have produced an equal result. This will receive the test of another trial. The land is a strong or clayey loam; and what is worthy of notice, is in the midst of a limestone region, where the country is underlaid by the rocks of the corniferous limestone, which is abundantly scattered over the surface. But acids do not show carbonate of lime in the surface soil.

◆

Ready-made Yeast.

In a late number we gave directions for making yeast. A successful housekeeper who has just read it, informs us that she has adopted that mode for many years, but that she finds the addition of the potatoes of no benefit and no injury, and for years has used only Indian meal, which is simpler and easier to make. In using the yeast for making bread, she omits the soda, believing the bread better and more wholesome without; and those who have eaten bread of her manufacture, would have to travel a long road before they would find better.

THE FARM AND THE WORKSHOP.

Our correspondent, Mr. S. E. TODD of Tompkins county, has prepared a volume, announced several weeks ago in the COUNTRY GENTLEMAN, under the title of "The Young Farmers' Manual." The "Farm and the Workshop," which is added on the back of the book as a subtitle, expresses its character much more nearly. Every good farmer should possess an acquaintance with the use of many tools, the employment of which he has never learned as a trade, and the "various operations of the farm" which the Preface of the present volume announces it to be the author's purpose "to instruct the young farmer how to perform," are mainly those of the workshop, together with such outside matters as locating the farm-buildings, and putting up fences of various kinds. Brief chapters are also given upon Draining and Plowing.

It is not the object of the present notice to review critically "The Young Farmer's Manual," but to give to our readers who have not as yet purchased it, a general idea of its contents—in the progress of which endeavor, it cannot fail to be apparent that the book must include a considerable store of useful information. It may not be improper to remark in the beginning, that Mr. Todd has acquired this information—almost exclusively, unless we are mistaken—from his own experience. He has gone very fully into detail with regard to many particulars on which this experience has shed light in the saving of labor and expense, and while this will be a recommendation to the class for whom the book is primarily intended, namely, for *beginners*,—some may be found to wish that its design had admitted of a little greater condensation, particularly upon one or two subjects that quite overshadow all the rest in the length at which they are treated. For instance, on the title page we are promised "full directions for performing nearly every branch of farming operations," while the following table will show the divisions of the work itself, after we pass the 25 pages composing a general introduction:

Chapter I—The Buildings of a Farm,		80 pages.
II—Fencing,	172 pages.	
III—Tools for Fencing,	57 do.	
IV—Fence Laws,	2 do.	
Total pages about Fencing,		231 do.
V—Underdraining,		34 do.
VI—Plows and Plowing,		24 do.
VII—Harrows and Harrowing,		6 do.
VIII—Sowing Grain, &c.,		14 do.
IX—The Farmer's Workshop,		82 do.

In other words, more than half the book is made up of the chapters on Fencing and Fence Tools, first published in the Transactions for 1858 of our State Ag. Society, but now to some extent re-written or re-arranged. A second volume is to follow, as we learn from the introduction of the present one,—in which we are referred (pp. 15, 16,) to it for "Fitting up Machinery," "the Principles of Draught," &c., and also, as we are glad to find in another place, for a chapter on "how to make a good farm better." For, in a farmer's "manual"—however important more attention to better machinery may be and is—it should not be overlooked, that, after all, a tolerably fair proportion of what the young farmer must learn in order to become a good one, is disconnected very widely from the mere keeping of his fences in good order, or the ability to "plane a board true and smooth." The more, in fine, that Mr. Todd can tell us of his own PRACTICE, the higher the rank we shall award his work as a Manual for other farmers.

AMBER VARNISH.—Will some of your subscribers give a recipe for amber varnish through THE CULTIVATOR.

B. F. SEVERANCE.

[For the Country Gentleman and Cultivator.]

FRUIT-GROWING IN NEW-JERSEY.

Much attention is now given to the cultivation of small fruits, which are far more profitable in this vicinity than common farm crops, and many persons having but a few acres of land devoted to choice fruits, clear more money than others who cultivate large farms in the ordinary way.

Strawberries have yielded abundantly, and brought remunerative prices. Wilson's Albany produced with the writer over two hundred bushels per acre, and averaged four dollars per bushel. One gentleman in this neighborhood gathered one hundred bushels of strawberries daily through the height of the season. The most favorable results have followed the use of the subsoil or mole plow, by which the beds and alleys are thoroughly loosened to the depth of 15 to 17 inches. The plan is, soon after the fruit is gathered, to take a strong team and pass the plow several times through the beds, going below the plants, which lifting the earth a little makes it so mellow as to admit air and moisture, and gives to the plants new life and vigor; there being a greater depth of soil prepared for the roots to penetrate, they will better resist the action of frost in winter, and the drouth in summer.

Raspberries have yielded better this season than usual; the high price at which they have been selling, has induced cultivators to introduce new varieties and give better treatment. The earliest varieties commenced ripening here about the 20th of June, and have yielded with me forty bushels per acre, and brought eight dollars per bushel.

The Allen raspberry is being extensively grown, and when properly treated yields large crops of perfect berries, and the most delightful flavor. Some persons having depended on it alone for a crop of fruit, have failed, as the blossoms are deficient in pollen, and unless impregnated by some other variety, will not develop its fruit any more than a plantation of Hovey Seedling strawberries. Allen's Red Prolific, however, which is an upright grower with red canes, bears abundantly by itself of most beautiful berries, which have brought 31 cents per quart and upwards during the whole season, and is amply sufficient to impregnate the Allen Antwerp, and should be mixed with them in planting. Thus treated, the Allen has continued to yield a full crop of fruit with me to the close of the season, and has suffered less by exposure to the sun and dry weather than other varieties. The luxuriant growth of young suckers thrown up around each hill, protect the fruit and bearing canes from the direct rays of the sun, which upon other varieties not producing suckers sufficient for shade and protection, have withered up prematurely. The proper plan for field culture is in hills, and by farming each way with the plow and cultivator, superfluous plants can be destroyed as easily as grass and weeds, and are not so objectionable as has been stated for a family garden.

As the raspberry season is about closing, blackberries are commencing. The Dorchester is now at its height, having been ripening for ten days past, is yielding a full crop, and will be mostly over by the time the New Rochelle is fairly under way; price thus far has been 25 to 31 cents per quart. My whole crop last year averaged 21 cents per quart, although the market at the same time was overstocked with the common wild blackberry. Several farmers in this vicinity have from 12 to 25 acres each in cultivation for market.

Currants and gooseberries have done well. One gentleman having 12 acres in gooseberries, informed me that they yielded him 100 bushels per acre, and he was then receiving $2.25 per bushel, and paid 25 cents per bushel for picking them.

We are now preparing to sow buckwheat and rye together on new stump land; for two years past I have adopted this plan, and had excellent crops of both buckwheat and rye from the once plowing. Both crops being well adapted to destroying the wild nature of the ground, leave it in fine condition for succeeding crops with but little labor. WILLIAM PARRY. *Cinnaminson, N. J.*

Editorial Notes Abroad.

No. XXXIV—Across the Irish Channel.

Into Sleaford, then, I came on the Monday morning of the week in which the Irish Show was to take place at Dundalk, and consequently with too little time at command to learn as much as I should have liked of the good farming of the Messrs. Lowe and their neighbors, whose farms I visited upon Lincoln Heath. But there were two peculiarly English features of the visit, which are worthy of a moment's attention.

Market Day and Rent Day.

In the first place it was the Market day at Sleaford. My friends, like many others of the farmers of the vicinity, were in attendance with little bags in their pockets containing samples,—as, greatly to the convenience of both parties concerned, the buying and selling is all transacted by sample, as was remarked in the course of my Norfolk notes. These markets are constantly increasing, I understood, in number and importance throughout England; and there can be little doubt but they would be found essentially of service to the interests of farmers in this country. We might not require them, at first, so frequent in their recurrence, or so numerous in a given area, because there are seasons of the year when our roads are not so passable as theirs, and because, moreover, the demands of purchasers here would scarcely warrant it.

In the second place, Tuesday (July 26) was the Rent day—an occasion of considerable importance, you may be sure, to an English farmer—and the Agent of the proprietor was in waiting during the morning to square the accounts of the year with the tenants. In the evening, in the absence of the landlord, the same gentleman presided in his stead at a dinner to those who had previously been contributing so much to render his exchequer a heavier and their own a lighter one. Although by agreement, I think, the rent is due quarterly, unless I am mistaken, it was the usual custom here to make the four settlements at once, at the same time each year. The which having been completed in a satisfactory way, one naturally feels that the burden of a twelve month is ended, and enters upon that of the coming year the more cheerily for a re-union in which kind wishes and good healths may be mutually interchanged. I suppose that the *class* spirit, if it may so be termed, is getting to be nearly as strong among English farmers, as a body, as it is among the manufacturers and commercial men of the country; it is at least much stronger than here—the farmers are consequently a more united and influential body, understand their interests better, and feel a correspondingly greater sympathy with each other, and jealousy of any interference with their affairs by any other class in the community.

By the kindness of Mr. Lowe, I was present at this dinner, which, succeeded by tea and subsequently by pipes, kept many of the company together until after midnight. It afforded me a fresh opportunity of discussing agricultural matters with the intelligent and energetic tenant-farmers of that part of the county, and illustrated throughout quite forcibly the prevalence of the feeling alluded to above.

Culture of the Mangold Wurtzel.

It was to my friend, Judge French of New-Hampshire, that I was indebted for a note to Mr. L., and many were the references made to his visit there two years previously other circumstances, to his interest in the Mangold crop, and to the directions Mr. L. had furnished him for its culture. These directions I copy below:

"Take dry land, well drained,—not clay—that will work fine, say after wheat. Manure with twelve tons of good manure to the acre, at least, and the more the better. Plow it in six inches and leave it till spring; then when dry enough, harrow deep, roll and work fine with plow and harrow. Sow broadcast at least 560 pounds of salt; twice the quantity is better. Throw into ridges, twenty-seven inches apart with a common plow. Soak the seed eighteen hours in water, and lay on a dry cloth twenty-four hours. Drill with a hand-drill, three to six pounds of seed to the acre, Examine and see if the seed is sound or has been eaten by an insect. Drill 100 pounds of superphosphate with ashes, the more the better, with the seed on the ridge, the ridge having been first rolled lightly to flatten it. Sow one inch deep, dropping the seed six inches apart. Hoe as soon as up—thin out to one foot apart. Horse hoe and keep clean. Look over and be sure to have but one plant in a place.

"In October or November gather without breaking the skin, cut or twist off the top an inch above the root, remove the earth with a dull instrument, so as not to cut the root. They are usually stacked and covered with straw and earth in England, but will probably, (says Mr. Lowe) keep like potatoes anywhere. Average crop 26 to 30 tons of 2240 pounds to the acre. Spread the leaves evenly over the ground and plow in. By no means remove them from the land. Do not feed out till February, because the mangold is poisonous early in the season, and will scour the cattle and do them no good."

Agricultural Education in Ireland.

How I was obliged to hurry away, the journey to Dundalk, and the story of the exhibition that there took place, were all recorded in my letters at the time, with brief reference to a visit at the Agricultural School at Glasnevin, the notes of which last, accompanied by a sketch of what is now going on to advance the cause of Agricultural Education in Ireland, even at this late date, will be new to many readers here. The official report of the Commissioners of National Education for the previous year, (1858) has been published since my return home, and was at once kindly forwarded to me by Dr. Kirkpatrick, Inspector of the National Agricultural Schools, with some other interesting papers, from which, and the information gathered at the time of my visit, I draw the following facts.

Although the subject had been previously discussed and partial action taken, it is to "the deplorable effects of the famine of 1846–7 on the agricultural community of Ireland," that the present extended plan of operations is ascribed, having, as its object, "to bring agricultural knowledge within the reach of the great mass of the small tenant farmers and laboring poor." The system has since been developed by degrees until, December 31, 1858, it included, beside the Albert National Agricultural Training Institution at Glasnevin, with 71 pupils, schools partially or entirely under governmental control as follows, if my summary is correct of the statistics given in the report, of which there does not appear to be any aggregate table appended:

Twenty schools under exclusive management of the Commissioners, with	666	pupils.
Twenty-one Model Ag. Schools under Local management, with	857	do.
Forty-seven ordinary Ag. Schools, with	1,840	do.
Sixty-seven Workhouse Ag. Schools, with	2,693	do.
Add for Glasnevin,	71	do.
Total, 156 schools, with	6,127	pupils.

The Albert Institution.

The Training Institution at Glasnevin was established in 1838, with a farm of 50 acres, extended somewhat in 1849 and in 1850 to 180 acres, its present size. Its pupils are "boarded, lodged and educated at the public expense," with few exceptions—there being for example, but three paying pupils in 1858. The requisites for admission are the age of 17 years, certificates as to good character and health, and the ability to pass an examination in the simpler branches of study, such as reading, writing, grammar, geography and arithmetic, together with some knowledge of book-keeping and geometry. The extent of the course is two years. Dr. Kirkpatrick the Superintendent, has entire supervision, both of the educational and agricultural departments—assisted by two literary teachers and an agriculturist, Mr. Boyle, who is the practical farm manager. There is also a gardener employed. Dr. Hodges of the Queen's College at Belfast, lectures on Animal Physiology, the Diseases of Domestic Animals, &c., Mr. Moore, the curator of the Royal Botanic Gardens, on Botany and Vegetable Physiology, Prof. Sullivan on Chemistry and Geology in their relation to agriculture, Mr. Baldwin on Agriculture, and Mr. Campbell on Horticulture—each lecturer giving a course in each of the two sessions into which the school year is divided. The branches of study, aside from those embraced in the above lectures, are English grammar and composition, arithmetic, book-keeping and mathematics, including land surveying, levelling and mapping. The instruction in agriculture "embraces all those branches which constitute the science of farming, as well as a detailed account of the enlightened and improved practices of the day; and in order that the pupils may become thoroughly acquainted with improved practical husbandry, they are called upon to take part in the performance of every farm operation, and the feeding and management of live stock. They have an opportunity, too, of practically studying the application of steam power to agricultural purposes, as well as the use of a large assortment of those modern implements and machines, which are found economical substitutes for manual labor." All the labor of the farm is performed by the pupils, to whom its appearance is certainly most creditable.

The land in connection with the institution comprises two farms. One of them, called the large farm, containing a little more than 145 acres, is divided into four sections, of which one is largely composed of pasture land and is farmed on a system of its own, while upon the other three, three different rotations are employed for the purpose of illustrating the different methods most commonly approved, as follows: Twenty-one acres under a three course rotation of

1. Green crops, manured.
2. Grain, with Italian rye grass, and clover.
3. Grass, for soiling and for hay.

Thirty-six acres under the ordinary Norfolk four course shift, of

1. Green crops, manured.
2. Grain, with grass seeds, generally Italian rye grass.
3. Grass, for house-feeding cattle, and hay.
4. Oats.

Lastly, twenty-five acres under a five-course system, only differing from that last given, in keeping the land under grass two years instead of one. The balance sheet on this farm for the year ending 31st March, 1858, showed a balance of about a thousand dollars (say, £217 3*s.* 1*d.*) in favor of the pupils' labor.

The other, or small farm, of about 23 acres, was established in 1856, for the purpose of affording an illustration of small farm management, and to present to the sons of small farmers an example which they might imitate. The following five-course rotation is here carried out:

1. Turnips, Mangel-Wurtzel, and Carrots.
2. Potatoes, Winter Beans, and Cabbages.
3. Italian rye grass,
4. Do.
5. Oats.

The Italian rye-grass is sown in autumn, immediately after the harvesting of the potatoes and beans, and a most luxuriant crop is thus obtained. In the season of 1858 they had grass three feet long, and yielding ten tons per statute acre on this farm early in May.

Thus every opportunity is given the pupil here to acquaint himself as thoroughly as possible with the practical superintendence of farm operations on different systems and degrees of extent. The Albert Institution, remarks Dr. K., in his Report for 1856, is "the life and center of the entire system of agricultural education, and it is the great prize to which intelligent aspirants in the National Schools look." It appears, in fine, to be the intention of its managers to take up the agricultural education of the pupil where the other schools leave it, and by two years farther and more careful training, qualify him to go to farming for himself, to seek a place as farm manager for others, or to act as teacher in any of the other schools. The report for 1858 states that of the 48 young men who completed their course the previous year, there were then 21 farming at home for themselves or parents, 7 occupying positions as land stewards, 4 as agricultural teachers, and 2 as literary teachers.

There are $500 awarded annually among the Students at Glasnevin in prizes—$50 in each of the following branches, Chemistry, Botany, Animal Physiology &c., Horticulture, and Literary subjects, and the remaining $250 in various strictly agricultural prizes. These prizes are determined by oral and written examinations upon the lectures and studies of each session—in the latter (the written examinations) a scheme of questions being submitted, to which the pupil writes out the answers to the best of his knowledge and ability, in a given time—I suppose of course, without the opportunity to consult any authorities, but compelled to rely upon the knowledge acquired by him during the studies of the term. As an example of these examinations in one branch of study—Practical Agriculture—I am able to give the following series of questions, which I copy here for the purpose of showing what kind of practical "training" it is that the pupils are expected to receive:

PRACTICAL AGRICULTURE—Examiner, MR. BALDWIN.

"1. Give the order of succession of the crops in the three, four and five course rotation, and state the circumstances to which each of these courses is best adapted.

"2. Supposing a farm of 20 statute acres of good land, under the three crop course, how many head of cattle could be maintained on it throughout the year? Give the particulars.

"3. Give the dates of sowing the several cultivated crops, and the soils best suited to each.

"4. Assuming the value of horse labor at 2s. 6d. a day, men's wages 1s. 3d., and women's wages 10d., and farmyard manure 4s. a ton—estimate the cost of an acre of turnips. It will be necessary to give the number of 'hands' required for each operation.

"5. Name the four varieties of each of the following crops most in favor among intelligent agriculturists—mangel, turnips, wheat, and oats.

"6. State the merits of Italian rye grass as compared with other forage plants.

"7. What are the relative merits of mangel wurzel and Swedish turnips?

"8. State your views on the theory of the rotation of crops. The answer must embrace the two following, among other points:—1st. How far a farmer should bind himself to any prescribed course. 2d. How prevent the land from becoming 'clover sick,' 'turnip sick,' &c.

"9. Give the periods of gestation of the domestic animals, and the best time for serving dams.

"10. What is the most economical way of fattening cattle; and what the probable profit on an ox so fed, which weighs 8½ cwt. when put up to fatten? It will be necessary to give the quantities of the several kinds of feeding, &c."

The questions submitted upon the other subjects of study cover similarly extensive ground, and require equal ly thorough acquaintance with their details—not a knowledge "by rote," but one that may be made serviceable as occasion may require. "Our primary object," writes Dr. K., "as a teaching body, is to make known the laws which Science has established, and inculcate those practices which experience has sanctioned."

At the same time it is thought both expedient and beneficial to conduct occasional farm experiments, in which, as may be readily imagined, intelligent pupils would at once take a deep interest, while in the course of their development there must be many opportunities of impressing useful lessons upon the memory. The report for 1858 contains accounts of experiments carried on during that season, with regard to the relative value of different manures in raising Swedish turnips, and as top-dressings to grass lands—also with respect to the comparative merits of different varieties of Mangolds, of which the "new yellow oval" was found to yield considerably better than any other.

— But this subject is growing upon my hands so that I shall have to defer its conclusion until another opportunity.

No. 23.—THE STRIPED FLEA-BEETLE.

J. W. L. of Solsville, Madison Co., N. Y., incloses to me in a letter dated June 19th, some insects which he says are "committing great depredations upon the bean crop in this vicinity. They eat mostly under ground. After the beans are well sprouted, and within half an inch of the surface of the ground, they bore minute holes on the inner side of each half of the bean, and it is, of course, stunted, and soon turns black. They sometimes attack the stalk below the bean, also, and follow it down an inch or more, though this is not common. These insects are very lively, and it is difficult to catch one of them. They do not seem to fly, but hop. Two or three of the specimens are larger, and may be a different insect; yet they are found together, all engaged in the same occupation, that of destroying the beans."

I find three different insects in this inclosure, which, being taken associated together, merit a notice, as the real culprit will hereby be more clearly pointed out to any one who searches for it.

The two largest specimens are young soft field crickets, recently hatched from the eggs—black, with a whitish band across the middle of their backs. Whether these feed on vegetation or on other insects is not fully ascertained.

Next in size is a specimen of a small black beetle with two pale yellowish spots on each of its wing covers, and hence named the Four-spotted Bembidium (*B. 4-maculatum.*) This is very common in our gardens. It never hops, but sparkling like a diamond in the bright sunshine, it runs briskly in a very serpentine or zigzag track, a few inches, till it gains some crack in the ground, or other covert, in which it abruptly disappears. It feeds on other insects, its strength and agility enabling it to overpower those that are much larger than it in size.

Finally, there are three specimens of the striped flea-beetle, the *Haltica* (*Phyllotreta*) *striolata* of Illiger. This is also an insect which is quite common in our gardens and often does much injury. Its favorite food, evidently, is the leaves of the mustard. About the middle of June many of the leaves of this plant may be seen perfectly riddled with small holes by this insect. A hungry beetle gnaws a hole sometimes the eighth of an inch in diameter but most of the perforations are smaller, scarcely large, enough to admit a pin, and each of them is edged by a white ring, which again is inclosed in a blackish circle.

But in addition to the mustard, all plants of the Natural Order *cruciferæ*, are fed upon by this beetle, and it thus happens that the young tender leaves of radishes, cabbages and turnips are attacked and often seriously injured or even destroyed by it. And these leaves being not thin like those of the mustard, but thick and succulent, it is usual for the insect here to merely nibble little holes into, without reaching through them, some of the holes being sunk in the upper, others in the under surface of the leaves. Nor do these leaves become discolored at the wounded points, as in the mustard, but retain their green hue. Perforations occur, it is true, reaching through these leaves, but these appear to be made seldom by this, but mostly by other insects.

Though the injury sustained from this striped flea-beetle is usually slight and but little regarded, it is sometimes quite formidable and vexatious to the gardener. Around Albany I am told that, some years, whole beds of cabbage plants, if not watched and attended to, are destroyed by these flea-beetles, sometimes in the short space of twenty-four hours. In the winter of 1857, Hon. E. A. Lawrence informed me that, what I recognized to be this insect, had been very destructive to the cabbage crop in all the gardens around New-York the previous summer. In his own grounds at Flushing, he had planted six acres to cabbages, but to such an extent were they wounded and killed by this insect that he finally cultivated but one acre, and to accomplish this he was obliged to set the ground over repeatedly with new plants, as those previously set disappeared. And this insect was the principal cause of the scarcity and high price of this vegetable in the city markets that winter, it being nearly double its ordinary price.

Accustomed as we are to seeing this beetle openly exposed upon leaves in the clear sunshine, and feeding upon plants which possess an acrid, pungent taste, we should not expect it would penetrate under the ground to get at the mild and almost tasteless seed-leaves and root of the bean. But Mr. L.'s account of its gnawing minute holes upon the soft inner sides of those seed-leaves, is so like the work of this insect, that, in connection with the specimens he sends, it appears to render the fact sufficiently authentic. The bean before it sprouts from the ground must, therefore, be added to the plants to which this insect has heretofore been known to be destructive.

This striped flea-beetle is a very small, shining, black insect, scarcely the tenth of an inch in length, with a pale yellow stripe on each of its wing covers, which stripe is not straight but is slightly bent or wavy. Notwithstanding the smallness of this insect, the whitish stripe upon each side of its back may be distinctly seen by the eye, in the clear light of day, and this mark, in connection with this insect's leaping with the briskness of a flea, will suffice to distinguish it from all the other insects which are liable to be met with in the situations where it occurs.

In some specimens, however, the stripe alluded to is partly obliterated, its two ends only being present, thus forming four spots upon the back, and then the insect has a considerable resemblance to the four-spotted Bembidium above mentioned. This four-spotted variety was discovered and scientifically described anterior to the normally marked insect, by Fabricius, in the year 1801, who gave it the name of *Crioceris bipustulata*. But as this is only the name of a variety, it is not entitled to stand as the designation of the species. On a subsequent page of same volume, Fabricius described the species more correctly, naming it *Crioceris vittata*, but he had already given this name, *vittata*, to another species of *Crioceris*, hence it could not be employed to designate this species also. In 1806 it received the name *striolata*, from Illiger, not Fabricius as Dr. Harris incorrectly says, and by this name it has been usually designated since. In the catalogue of Coleopterous Insects published by the Smithsonian Institution, two very distinct insects are confounded together under this name, the *elongata* of Fabricius and Olivier, which is also the *tæniata* of Say, being a southern species quite different from the *striolata*, and unknown to our entomologists at the present day, though specimens of it have been sent me by both my valued correspondent, Wm. S. Robertson, from west of Arkansas, and my daughter, from Mississippi.

I have only to add, that dusting the plants infested by these flea-beetles, especially when the dew is on, with lime, ashes, plaster, Scotch snuff, or soot, or with two or three of these mixed together, is the remedy popularly resorted to for repelling them. I have not tested these articles with sufficient attention to form an opinion respecting their efficacy. The insect is very shy and timorous, and whenever I see it on radish or cabbage leaves, I am accustomed by striking the hand towards it, and by brushing and shaking the plants, to scare it away; and I entertain the opinion they will mostly forsake spots where they are frequently menaced and disturbed in this manner, and resort to situations where they find they can remain unmolested. ASA FITCH.

CULTURE OF GRAPES IN POTS.

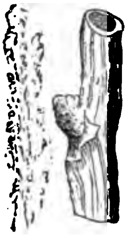
EDS. CULT. AND CO. GENT.—I would like to ascertain through the medium of THE CULTIVATOR, the best practical method of raising grapes in pots. By a description of the system, at your convenience, you will oblige one at least of your many subscribers. N. H. PERRY. *Conn.*

The culture of grapes in pots requires more skill and attention than by other modes, at the same time that it possesses some peculiar advantages. One of these advantages is the small space they occupy, nearly double the amount of fruit being obtained from a house occupied by vines in pots, as by the ordinary method. Another is the facility with which the plants may be transferred from one place to another, as growth, warmth, &c., may require, and thus they need not occupy space in the house when not growing. A third is the small amount of prepared soil needed for filling the pots, as compared with that required to make or fill a large border.

The skill required is more especially needed in watering. The earth in which they grow being in small quantity, requires great care to be kept exactly at the right degree of moisture. The quantity applied must also vary with the size of the vine and the rapidity of growth.

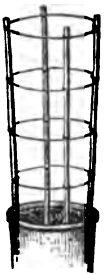
Eyes are usually employed in propagating the vines, one being placed in each pot. If they grow vigorously they may be made to bear fruit the second year, but more usually the two first years are consumed in preparing the vine, and the third gives the crop. Some cultivators change the pots often, as the plant advances, but where fruiting is an object the second year this frequent *transfer* would check growth too much, and three changes throughout are enough. As there will be a large amount of prepared earth in a large pot, unoccupied by roots, when a small vine is first placed within it, the watering should be given only at the center, that the soil may not be needlessly soaked and soured before the roots reach it and pump up and carry off the water.

The compost for filling the pots may be an equal portion of leaf mold, sand and turf, for starting the eyes and for the early part of their growth. It should not be very fine, but somewhat porous. If, however, the soil from which the turf is taken is light or sandy, the leaf mould and turf only will be required. Subsequently, where they are removed to a larger pot, a compost of the same materials with an addition of one-third rotted stable manure, and one twentieth leached ashes should be used. To produce a rapid growth, liquid manure should be employed for watering—it may be the drainings of the manure heap, a mixture of fine manure with water and a little ashes, with the clear liquor afterwards drawn off; or guano water, made of one pound of guano to ten gallons of water. Care must be taken to water quite moderately at first; but as the plants advance rapidly in growth, and fill the pots with roots, it must be given copiously. It should be remembered as a guide that a plant with three leaves will need but a tenth part of the water required for one with thirty leaves; and also besides this that a fast growing vine will consume water in proportion to its increase. When the wood turns brown the watering should be diminished, and when the fruit begins to color it must be still more sparingly administered, if a fine flavor is desired. The water should be of the same temperature as the air in which the grapes grow.



The time for starting the eyes may be in the latter part of winter, or very early in spring. The strongest, plumpest, and best ripened buds must be selected; the mode of propagating will be found in most books on fruits, and is shown in figure 1. If desired to fruit the second year, a good bottom heat will be necessary during the early part of the season to hasten growth; and a frequent and judicious pinching back will be required to prevent the strongest buds from forming only on the upper part of the vine. A similar result is obtained by training the vine *downwards*. If the fruiting is commenced the second year, cut back the vines about three feet high; if the third year, they should be cut nearly down, and new canes trained for the succeeding year. Even when every care is taken to have bearing vines the second year, a portion will be too weak, and will require cutting back for a third year's bearing. Five to eight bunches will be enough for one vine. If heavily fruited, the vines will bear but one crop and become exhausted. If they sparingly bear, they may be removed afterwards to a new pot, pruning the roots and spreading them out, and after one year's growth of a new cane, bear a second year again. Good cultivators, however, generally prefer raising new plants from eyes, finding it less trouble than to recover an old vine, and giving better fruit.

Where early forcing is adopted, it is important to suspend the growth as early as possible the previous autumn, so as to give a period of repose. This is accomplished by watering sparingly, placing the pots on the north side of a building, and, if necessary, by turning them on their sides to allow the water to drain off.



Support for grapes in pots.

The after treatment of the vines during the bearing season, is quite similar to that in common grape houses—the shoots being stopped when the branches form, and again when the grapes swell. The best and most evenly distributed bunches must be selected, the rest removed—it is much better to have too few than too many—five or six bunches to a vine will usually be quite enough. The accompanying cut (fig. 2,) will show the mode of constructing the supports, consisting of four wooden rods, supporting horizontal wires.

Pots or tubs twice the size of a common 12 quart water-pail are of a good size for the bearing vines. The Hamburgh and Muscadine succeed finely cultivated in this way.

A great convenience of pot-culture, consists in the small space which the vines occupy, and the perfect control of position, as circumstances require. Any vacant portion of a small or large green-house will afford the required space; a moderate or a rapidly forcing heat may be given them, observing to keep the temperature of the roots a little above that of the air. If forced, the fruit will ripen by the first of summer, otherwise three or four months later; and if set aside in a cool room, the late ripened grapes may be kept on the vines for months, during which time they may even be employed as a parlor ornament.

☞ The Bourbon County (Ky.) Ag. Society has reached its *Twenty-fifth Annual Fair*, which is to be held at Paris on the fine grounds belonging to the society, Sept. 4–7; President, Brutus J. Clay—Secretary, A. M. Brown.

HINTS FOR THE SEASON.

The summer harvests are now secured—the chief and remaining labors of the season are the sowing of winter grain, and securing the crops of autumn. But there are many other operations that should not be neglected.

In many places there are muck swamps, now comparatively dry, that may afford a large quantity of the material for manures. If it may be shovelled or drawn out on a dry platform or hard earth surface, it will be more convenient for drawing in winter. A large pile of this kind, thatched with straw or covered with a rough shed, will continue to become drier till winter, by which two important points will be gained. Swamp muck, when saturated, contains some five-sixths of its weight of water. The labor of drawing when wet would therefore be six times as great as when thoroughly dried. Wet muck will not absorb the liquid parts of manure—but when dry it will take in and hold several times its own weight. The great point therefore, in using peat or muck for composting, is to get it thoroughly dried.

Compost heaps, for farm use, should be made wherever practicable, near the field or spot to which they are to be applied, with a view to save cartage. If large muck-heaps can be deposited at those places, a great advantage will result; for the stable cleanings, as they accumulate, may be drawn out there and laid in their alternating layers with the muck, the new heap being made closely alongside the oblong pile of muck. If the swamp happens to be near a remote part of the farm, which is to be enriched, many days labor in drawing first to the barn-yard, and then back again, would thus be saved. By making quite thin alternating layers, the labor of mixing over may be avoided.

Preparation should be made early for ample winter shelter for stock, where not already fully provided. One-third of the amount of food consumed by animals is saved by proper warmth; one-third more, in value and insurance to the animals, and dairy animals give about one-third more milk and butter. The farmer who has, say twenty head, will thus save about one hundred and fifty dollars each winter, according to a safe estimate—an amount which would soon pay for the whole expense of the buildings,—to say nothing about the increased value of manure where facilities are afforded for saving it.

Wet portions of ground, which could be neither cultivated nor drained in the spring, if now submitted to thorough underdraining, will be increased immeasurably in value.

Briers, elders, &c., if cut immediately, will be much checked in growth another season; and if the process is repeated, will be mostly destroyed.

The vacant portions of time which every driving farmer may secure for this purpose, should be expended in building stone fences or walls. Such walls should always be laid in a trench as deep as frost usually penetrates, filled with small stone. Unless this is attended to, the heaving and subsiding yearly by frost, will ultimately throw down the most perfectly built wall. A good stone fence will never decay, and the removal of refuse stone from the land is a great advantage—let it be therefore not neglected.

Root crops, which have been kept clean during the early stage of their growth, are apt to be now neglected and become weedy. By dressing them out when needed, the crop will be better, and the ripening and scattering of seeds for a troublesome crop of intruders another year will be prevented.

Cellars should be thoroughly cleaned, ventilated, whitewashed when needed, and prepared for the crops of autumn vegetables—that these may be kept neat and in perfect condition. A cellar in confusion and infested with foul matter, is a most unsuitable place to stow eatables; while one neatly kept and handsomely filled, is an interesting sight.

Hogs should be fed early to fatten—a few weeks at the commencement, early in autumn, may be more than equal to as many weeks towards winter. Keep them clean, and they will thrive better; feed them regularly, and they will fatten faster; and as there is an abundant apple crop this year, half the cost of fattening may be saved by feeding refuse apples in sufficient abundance.

Do not neglect to save a good supply of the best selected seed corn. In cutting up corn, a great deal of valuable fodder is lost by carelessnees in putting up the shocks. If they stand erect, the stalks will be uninjured; if they incline or become prostrate, the fodder will be half rotten and of little value, to say nothing of the diseased and feeble animals resulting from feeding such stuff. Be careful, in putting up the shocks, to place the stalks evenly and compactly on all sides, and tie them up firmly, and they will remain so; but pile them all on one side in a careless manner, and they cannot stand. We occasionally pass a corn-field in autumn where the shocks stand as they should do; but more frequently we see many prostrate heaps.

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DRILL CULTURE—PLOWING IN GRAIN.

The *Homestead*, (Hartford, Ct.,) after some discussion of the Drill vs. the Broadcast system of sowing seed, remarks as follows:

"An approximation to drilling is covering with the plow—running broad, shallow furrows, so that the ground shall be left in ridges between them, the grain being first sown broadcast. When it grows, it springs up almost exclusively on the ridges; here will be a double depth of soil—in wet land drainage will be provided—on all but very dry or washy land, no danger will be apprehended from either too great dryness or washing out of the seed or young plants before they are well established, and after they cover the soil and begin to tiller, there will be no danger from either of these causes. Land in such shape will take the sun better; there will be less danger from winter-killing—the ridges keeping dry. Moreover, if the snow blows off, only one side of the ridge will be exposed —if injured, that on the other side will fill up the space."

"These arguments," adds the Homestead, "are presented for criticism without our experience or observation to back them. We think it would be worth while to test the practice thoroughly side by side with drilling and broadcast sowing," where the grain was covered by the harrow.

In some sections of this State, wheat is frequently sown broadcast and then covered with the gang-plow, and one of these implements is manufactured in Niagara county with a seed-hopper attached, so as to sow the grain and cover it at one operation. Most usually, however, the seed is distributed by the hand, then covered with the triple-gang—which does its work very well on any soil fit for wheat-growing. The field is harrowed before sowing, so that the grain may lie on a nearly level surface, and the gang-plow covers it very uniformly from three to five inches deep, leaving slight ridges, and throwing up the loose clods and stones, so as to make a rougher surface than would be left by the harrow. The grain springs up more or less in rows along the top of the ridges; not, however, with nearly the regularity of drill sowing, nor is it as uniformly covered properly. If the furrows run up and down the slopes, and are provided with an outlet ditch through the hollows, they act as drains—otherwise they rather hinder than help the passage of surface water. It is true, however, that the tops of ridges are generally dryer than the soil would be, were it level, and may thus be beneficial in the wet weather of the season.

The great objects of plowing in grain are, we believe, first to secure a better and quicker germination of the seed, and second, to give the field a rougher surface, which better holds the snow from blowing or melting away, and affords an important protection for the young plants during the season of frosts, preventing in a considerable degree winter-kill or heaving out. It is well known that from the effect of wind, a field with a smooth surface—one, for instance, rolled down after plowing—will be bare of snow, while a field left with the furrows untouched will retain a considerable covering. It is also true that after the show has gone, but while frosty nights are frequent, level soils suffer more from heaving out than rough ones—the ridged land, moreover, crumbling and falling down by day, covers to some extent the roots lifted at night. The spring rains may also have the same effect. These are some of the reasons for leaving wheat fields with a ridged surface, as in plowing in, and to some extent in drilling, and in covering with a coulter harrow.

But to return to the first object—the better germination of seed secured by covering with the plow. At the time for sowing winter wheat—very often the surface soil is too dry—sown broadcast and harrowed in, it would be covered with the dry soil, and lie waiting rain, perhaps weeks, before germination. The gang-plow covers more deeply, and brings the seed more certainly in contact with the moist earth. This enables the farmer to sow his wheat with safety, without waiting for rain until the best time has passed by. Wheat, of course, can be plowed in with a single small plow, but not as rapidly as with a gang.

The above are the arguments of those who have long practiced and observed this method of covering winter grain; we offer them in part for our friends of the *Homestead*, but more for those who may not have tried this method for themselves.

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[For the Country Gentleman and Cultivator.]

The Law of Reproduction with Fruits and Seed-bearing Plants.

Eds. Co. Gent.—Although the above topic may have been extensively discussed in our agricultural or horticultural works, yet it has never been my good fortune to meet with an article on the subject, and, believing it of much practical importance, I propose to offer a few suggestions, hoping that some abler pen will take up the matter and discuss it as it deserves.

It is a common saying that "like begets like," and in the formation of fruits and herbs, each was appointed to yield "seed after its kind." Still we are constantly told that "it makes no difference what kind of apple-seeds we plant, we never know what the fruit will be till seen."

And the same is true also of peaches, pears, cherries, and the endless varieties of fruits produced; their *seed* gives no assurance as to what quality of fruit we shall gather.

Is not the same true of squashes, melons, cucumbers, beets, carrots, and the endless varieties of vegetables and seed-bearing products with which our fields and gardens abound? We plant summer squash, and gather pumpkins or a cross between pumpkins and squashes which is only fit for pigs. We sow blood-beet seed, and gather white beets, pale red ones, and a few such as our seed purported to be, and turn away with impatience to accuse Nature of being false to her professions. But is she so? On the contrary, is there not an important law of hers which we have failed to observe?

The law is this. Different varieties of fruits and flowering plants mix, by the pollen of the one falling on the stigma of the other. The immediate product is not thereby materially changed, but the seed is; and the result is developed in the product of the seed when sown.

Thus, I have growing in the same orchard, Seeknofurthers, Spitzenbergs, Baldwins, and Northern Spies. Desiring to increase the number of my Baldwins, I plant the seed of that fruit; but when it comes to bear, behold I have neither Baldwin, Northern Spy, or anything else such as my orchard had previously borne.

Again, I set in my garden—for seed—a blood beet, a turnip beet, and a sugar beet. They are in close proximity, it is true, but I gather the seed with care; put the different varieties in different papers, label and put away for future use. On sowing my different varieties in different beds, I find the product "all mixed up." I have neither blood beets or turnip beets or sugar beets where they belong, but all sorts and no sorts, any where but where they were sown.. Now, where is the trouble? Simply here. I set my seed beets where they mixed in flowering time, and the result is seen in the heterogeneous mass of stuff which is grown on the different beds.

The same principles apply—with certain limitations—to all flowering products. The mixing is in the *seed*, by reason of its having been produced where its flower was impregnated with the pollen of some other variety of the same general kind. Farmers sometimes say their potatoes mix by planting in proximity. This, however, is a mistake. The seed within the balls mix, and if they plant these, the result will be some new kind. Their corn mixes, it is true, by planting in proximity; and so doubtless do their wheat and other grains. But here the seed and the fruit are identical. You cannot separate them as you can an apple from *its* seeds; a melon or a squash from its, and a beet and turnip from theirs.

White corn and yellow corn, side by side, will mingle their varieties on the same cob; but separate these varieties and plant again at respectful distances, and there is nothing more seen of the mingling.

The conclusion of the matter therefore is, that Nature is not treacherous to her laws. She observes the rules given her at the beginning; but, if we would produce from seed, plants such as we desire, we must know that our seed has been kept free from mingling with other varieties of the same general kind, during its flowering stage.

Clinton, *August* 3, 1860. S. W. R.

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NEW JAPAN PINKS.

Several new varieties of Pinks have been introduced into this country this spring for the first time, and have just flowered with us.

Dianthus Chinensis Heddewigii, or Heddewig's Japan Pink, is a dwarf annual growing six inches high, bushy, flowers borne on a short upright stem, and which are about two and a half inches in diameter, of colors generally a marbled velvetty crimson, sometimes rose or violet. The flowers are single and open well, with flat and smooth petals deeply fringed. These pinks, it is said, will be in flower three or four months.

Dianthus Chinensis Laciniatus, a perennial variety, much similar to the last, but with finer leaves and more straggling in habit of growth. The flowers are larger than Heddewigii, being fully three inches in diameter, of various colors; some double but generally single; said by Mr. Heddewig to blossom from the end of May until the beginning of frost.

These new pinks we think will become great favorites; they are certainly remarkably brilliant and showy flowers. Another season we presume the seeds will be sold at such a price that persons in moderate circumstances can afford to purchase them, the price this year having been what may fairly be termed a "fancy" one, viz., fifty cents for twenty seeds. G. B. H.

"GRASS AS A MANURE."

In a recent article on the "Manurial Resources of the Farm," we put grass-growing in rotation with grain crops as the first grand resource of the farmer for raising and keeping up the fertility of his soil. Having since noted several facts bearing upon this subject, which may tend further to illustrate and enforce the importance of attention to this fact in husbandry—"that the growing of clover and the grasses lies at the foundation of all profitable farming," we note them for our readers.

That on many of our natural wheat soils good crops of that grain have been grown every three years, and even every other year for many successive periods, is a well known fact. We find in the Rural New-Yorker of July 21, a letter from P. Hathaway of Milan, O., who for twenty years raised wheat annually on one of three fields, the wheat being seeded in spring to clover, dressed with a bushel of plaster per acre, pastured the next season, and then summer fallowed and sowed to wheat the third year. "The depth of plowing was uniform—what a yoke of oxen and span of horses attached to a No. 4 Iden plow could accomplish." The average yield of wheat for the first seven years was twenty-six bushels per acre; near the close of the term, thirty-six bushels, and now, on the same land, he had wheat growing which will yield from twenty-five to thirty bushels per acre, and this sown on oat stubble with two plowings. "The midge," he adds, "for a time was a baffling pest, but now, when we escape its ravages, the land proves itself unimpaired in fertility."

While we would not advocate any severe course of cropping tending rapidly to exhaust the soil, we would advise farmers to grow all the clover and grasses possible, if they would keep their farms fertile and productive when devoted to grain. As long as a soil with the aid of a bushel of plaster per acre will grow heavy crops of clover, we need not fear but it will grow grain crops at suitable intervals without further application of manure. We may find it most profitable to feed the grass grown to stock, taking the manure they supply meanwhile in return; still this would only be grass in another and (for this purpose perhaps) better form, with some additional elements gained from the animal organisms through which it has passed. But we did not intend to attempt any discussion of this branch of the subject.

Among the questions proposed to every competitor for a farm premium by our State Agricultural Society, is this: "What do you consider the best mode of improving the soil on your farm?" with reference to the different kinds of soil, clay, sand or gravel; and it is curious to observe how uniform have been the answers received. One (in the Transactions of '58) plows greensward under in the spring for corn; "likes to have a coat of grass on the turf to turn under;" some apply manure during the course of cropping before again seeding to grass. Another says: "My method of increasing the product is by the use of plaster (sown on clover;) on the 'home farm' I also use barnyard manure." Another top-dresses his meadows, to increase the growth of grass with a portion of his stock manure, while another puts all his manure on his newly seeded grass lands. These are mostly dairy farmers, who yet grow a considerable share of grain for home consumption.

Turning more particularly to the grain growing farms, we still find grass, and clover particularly, the basis of their rovement. "A clover lay of two or three years turn- ler in May for corn, or in August for wheat," is the general rule, applying manure, if at all, to the corn crop before plowing. Another takes care to return to grass before his soil is over cropped with grain, depending upon the former for the power to produce the latter, and we may say that it is a dependance not likely to be misplaced, if we give the grass crop the attention which it merits both from its intrinsic value and the place which it must hold in all self-sustaining, farm improving systems of agriculture.

"When we manure our meadows plentifully," says Thaer's *Principles of Agriculture*, "we are quite sure of a sufficient supply for our arable land," and when we find a farm under management rendering it capable of producing good crops of grass for pasturage or mowing, as said before, we may rest assured that it is really fertile, and may easily be continued so. A limited supply of manure, we think, would go farther if applied early in the fall (in a fine state) on sward land than in any other way. It would tend largely to thicken the turf by increasing the growth of roots and leaves beyond what would otherwise take place through the autumn and winter, as well as giving it an earlier start in spring—benefitting, in fact, both as protection and nourishment. Its value would be enhanced by this result, and the turf, when plowed under, would furnish a rich manuring for any desired crop. Deep plowing, draining, irrigation, any means to promote grass growing will give us at the same time profitable grain farms on all soils suited to its production, as, indeed, to one kind or another, most soils are.

WHEAT—THICK vs. THIN SEEDING.

The season of sowing is once more at hand, and the matter of seed and its commission to the earth is again and increasingly, we believe, receiving the attention of farmers. No course of conclusive experiments has as yet settled the important question as to the proper quantity of wheat for seeding an acre, or decided definitely and authoritatively on the contest of Thick vs. Thin Seeding of this and other grains. Much has been said and written upon the subject, but the experiments detailed as proof, point to such opposite conclusions that both sides claim the decision in favor of the mode which they have practiced. Thick seeding was most popular when the drill system was brought forward, resting in part its claims to superiority on the saving in amount of seed, and bringing strong testimony in its favor. Evidence equally conclusive is abundant on the other side, and thus the question seems left to the judgment of the individual directly interested—the farmer himself; he must follow his own views—employ his own discretion—and sow the amount of seed he thinks will produce the best crop.

Under a perfect system of tillage—giving all the ground and all the strength of the soil to the one product of wheat—no doubt the rule would hold good, that the greater the number of perfect stems and heads per acre, the greater the amount of grain produced. Such would seem to be the teaching of the experiments given in our State Transactions for 1849, where wheat sown in squares one and a half inches each way, taking nearly four bushels of seed per acre, gave a product of almost seventy bushels, while one-fourth the amount of seed, in squares of three inches, gave fifty-one bushels; and other trial plots, using two bushels of seed, and three-fourths of a bushel, gave respectively products rating at sixty and at forty-five bushels per acre. English experiments give about the same result, pointing strongly to an even distribution of the seed over the ground on all clean soils. Weeding, where needed, compensates for the loss of space in drill-culture, and we are not without experiments showing thin seeding very favorably by the side of the more liberal supply, espcially in cases of early sowing on rich or very carefully cultivated soils.

These various discussions and experiments point at least to one fact for the guidance of the farmer—but one very generally known and considered—that rich, deep thoroughly worked soils do not need as great an amount of seed as those of a less fertile character. In the early settlement of the great wheat section of this State, farmers long practiced sowing about one and a half bushels, or less, per acre, and on their fresh, unworn soils, doubtless raised as large, if not larger crops than they would with more abundant seeding. As the years rolled on, the amount of seed was increased in many cases to two and one-fourth to two and a half bushels, the plant showing less disposition to tiller and grow luxuriantly than before. The use of the drill effected a saving of at least half a bushel per acre, from the greater certainty of germination when covered to a uniform depth, over the variable amount of soil given when covered by the harrow.

It is found also, that the amount of seed necessary is effected by the variety of wheat, as well as the soil and the time of sowing; some kinds showing more disposition to tiller than others, and all making a greater number of stems when gaining a fair growth in autumn. Their influence should be considered by the farmer, but we would not advise him to rest satisfied with the fair results of thin seeding induced by the scarcity of seed for the last few years, but to give a full trial to the long settled practice of the best wheat-growers of ancient and modern times, in seeding liberally with a pure article of carefully selected grain, remembering that in this respect as in all, "as ye sow, so also shall ye reap."

USE OF THE CLOD-CRUSHER.

Sanford Howard states in the Boston Cultivator, that the following course is successfully pursued in Scotland with the clod-crusher. It is of course only used on heavy clay lands, which on plowing, break up into large clods; and the land must be comparatively free from stone. The soil having been plowed, and left in large clods, a grubber is passed over the whole, loosening up the clods, and leaving them at the surface. The grubber, as our readers may be aware, is like a harrow or cultivator, with long hooked teeth, which loosen the soil as deep or deeper than the plow has run. The clod-crusher is next passed, which breaks the clods into fragments, at the same time it tends to press the soil too compactly together. An indispensable part of the operation is now to follow with a grubber to loosen the crumbled soil.

We may add that heavy and tenacious soils, which have been regularly drained, and are judiciously managed, do not often become a mass of large clods, yet this is sometimes the case when hot, drying weather succeeds heavy rains, before plowing can be accomplished. In such instances, the successful planting and cultivation of a crop, could not be expected. We have known a corn crop to be nearly doubled in product by the use of a one-horse clod-crusher between the rows, to reduce the lumps into mellow earth. On undrained clay soils, its use would undoubtedly be often eminently advantageous.

[For the Country Gentleman and Cultivator.]

Travels in Iowa—Farmers' College.

Messrs. Editors—I left Muscatine July 24, for the College Farm in the centre of the State, 175 miles—38 of which is by railroad to Iowa city, and the rest by stage and on foot. At present this farm is between three principal routes of travel, one west through the Capital, one up the Des Moines valley, and one up the Iowa river. It is on the route of the Chicago, Iowa and Nebraska railroad.

It may be thought wild to talk about railroad routes in Iowa; "they were exploded two years ago." If persons could have traveled with me nearly 400 miles last week and this—if they could have seen the beauty, goodness and greatness of this agricultural and horticultural country—if they could have seen the beautiful golden harvest in shock, and the beauty of the uniformly and luxuriant growth of corn—not the wonderful great crops, but the *wonderful ease with which they are produced*—they would have understood and rejoiced with me at the sure prospect of the rapid advance of this country in all the improvements of the east. And even now, in these "exploded" times of the west, they are laying the iron rail 17 miles west of Iowa city, and will soon have it 30, up to Merango. And on my return, as I left Iowa city, we had 16 loaded freight cars, and before I left the train, in 26 miles, it had increased up to 30. The quantity of freight will be greatly increased from month to month.

The cattle look as fat and sleek as otters, running at large, and in this dry time gathering in herds about the streams; mostly scrub stock, but many very fine Durhams, and occasionally a fine milch cow. Our farmers are beginning to appreciate the difference between a *scrub* and a large well formed *Durham*. Quite an improvement in the breed of hogs of late. Sheep few. Mr. Grinnell of the town of that name, has brought in this season 2,000 fine wool. Our country is not half stocked with animals, and our farmers are determined to increase it until their stock will consume their great crops of corn. We must count on the amount of money we can get for a ton of produce—wool first, butter and cheese second, beef and pork third, and flour fourth.

This season has been a hot and dry one, having a spell of drouth in every month, beginning with March and ending with July, for lately we have had a bountiful pouring out of showers over most of the state, and probably all; for although it was dry and the corn leaves were rolling up when I came down the Iowa river two days ago, since then I have seen copious showers. This completes the crop of corn, and it is as heavy as I ever saw it in Iowa, and forward—many pieces in roasting ears this 3d of August.

Wheat first rate. In a former communication I had said it would be a good average crop, but it is above. I have heard of some being threshed which yielded 30 bushels per acre, spring. It is of best quality, plump and clean; I never saw it harvested so promptly in good season—a little tardy in stacking, but probably these showers will not continue long enough to sprout it—price 65 cents a bushel.

What is the prospect of foreign demand? We first hear of failure of crops in much of Europe; then "the probability is there is not much failure." Is not this "probability" for speculation in grain? Is it not English policy and American dealers' policy, to cry *up the qantity* and cry *down the price!*

College Farm.—We have 648 acres of land, timber and beautiful rolling prairie—70 acres in crops—120 under fence—a good bank-barn 42 by 60 being built—brick burned for the kitchen, wash-room and wood house of the farm house, and when these are all paid for we shall be at the end of our first $10,000, appropriated by the State two and a half years ago. We have no session of our Legislature next winter, and we shall wait patiently one and a half years to put up our College buildings, when we hope in three years to open our farm school. Suel Foster.

Muscatine, Iowa, Aug. 3.

[For the Country Gentleman and Cultivator.]

Harvesting and Keeping Root Crops.

MESSRS. EDITORS—In complying with the request of A. J. M., in the Co. GENT. of July 12, present vol., I shall perhaps be able to say but little that is not already familiar to the most of your readers; as my experience in harvesting and keeping roots will not vary materially from the recorded experience of others.

In harvesting roots, I begin with mangolds and turnips, which should be taken up before there is any hard freezing weather, as in consequence of growing more or less out of the ground, they are more likely to be injured than other kinds that grow mostly below the surface. Mangolds are pulled, first, in consequence of growing a considerable part of the root out of the ground; they can generally be pulled by hand without any trouble; but where this is not the case they should be loosened with a spade. They are spread on the ground a few hours to dry, when the tops are cut off, and those intended for winter feeding are taken to the cellar; and the portion that is intended to be used in the spring buried in round shallow pits about one spade deep, twenty-five or thirty bushels in a pit. The same course is pursued with turnips, which are next gathered. Carrots I have always taken up with a spade; but where there is a large piece, it would be better to run a plow close along one side of the rows, and turn away the ground, so the roots may be turned out into the furrow and easily pulled by hand. Parsnips can be taken up in the same manner as carrots, that is, those that are wanted for winter feeding. All that are not wanted until spring may remain in the ground until that time.

All the curing I have ever given to roots, or supposed they needed, was to let them dry off a little, and that is mostly done to allow whatever dirt may be attached to them to get dry, so that by handling them the most of it will rattle off, and which, as my land is a sandy loam, and they come out of the ground pretty clean, is all the cleaning that is found necessary as a general thing, though some kinds of turnips will have more or less small fibrous roots that will hold the dirt. In such cases I scrape the fine fibers, dirt and all off, with the back of a large knife that is used to cut up roots with. But this is not done until they are wanted to feed, for the reason that roots, to keep well, should be bruised and mutilated as little as possible.

There will be much less trouble in digging, cleaning and taking care of roots, if it is done before the long heavy rains, late in the fall, make the ground wet and muddy. From the first to the tenth of November is generally the best time in this latitude. In cutting off the tops of all kinds of roots, care should be taken not to injure the crown of the plant, as they will keep much better when the stems of the leaves are cut off just above the crown, where the last leaves are starting out.

The best method of keeping roots through the winter, I have ever tried, is to bury them; as when it is well done, they will come out in the spring as fresh, tender and sweet as when they were first pulled. In burying roots plenty of straw must be used. It should be put on the pile in the manner best calculated to carry off all rain and snow water, so as to keep the roots as dry as possible. About half the amount of dirt that is necessary to keep potatoes from freezing, will be all that ought to be put on roots, as a little freezing don't injure them in the least, while if kept too warm, they will grow badly, and sometimes rot. Each pit should be finished, and covered for winter, the same day it is began, as if left open a day or two, or longer, mice will be sure to find it, and make nests and winter in it, destroying more or less roots, and sometimes making a good many holes through the covering, letting in water, and causing them to rot. P. F.

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☞ The Regulations and Premium List of the Iowa State Agricultural Society for 1860, are at hand. The exhibition takes place at Iowa City, October 2-5; President, Hon. G. G. Wright; Secretary, J. H. Wallace, Muscatine.

[For the Country Gentleman and Cultivator.]

"BALLOON FRAMES"—5th Article.

There is at the present time among monied men who seek investment for their capital in the construction of buildings, a desire to ascertain the very nice point that limits the union of economy and absolute safety, and this point to which one may approach with confidence, and never, under any circumstances, go beyond, is a leading subject of study for the Civil Engineer and Architect. It has been stated by a distinguished Civil Engineer that the failure of a bridge, or any work, under the proper tests, conveyed a better lesson than its success, as illustrating the position of that point which theory alone can never so well show.

It takes many years of experiments to overcome popular prejudice, brought up to believe that a certain amount of strength, weight, size and labor are requisite for a certain result; we look with suspicion on any one who has the energy, the courage, or the impudence to pronounce the old fashioned mortice and tenon timber frame, with its heavy beams, wasteful extravagance of timber and labor, a relic of by-gone days handed down to us with all the prejudices and ignorance clustered around it. Every day we can see examples of such frames changing shape or tumbling down with their own weight, built with a condition that they shall be strong enough to support themselves, and then sufficiently strong besides for the uses intended, a *double* motive the balloon frame does not require.

Many mechanics will say the balloon frame is a humbug, an impracticable affair, or, at best, only adapted to the smallest of frames; they are evidently not posted, or else they consider the balloon frame a sad innovation on their business. Certainly the business of framing with heavy timber is somewhat interfered with, but then there will be none the less money expended in building. If men can put up buildings cheaper, they will build them larger, or build more of them.

There is, however, the undeniable and indisputable fact in every town and city, and on nearly every farm in the great west, and in California, that the balloon frame is not a humbug, is not impracticable, but is used indiscriminately for every grade of building required, and has been used since the early settlement of that portion of the west beyond Lake Michigan, say from twenty to twenty-five years, and thoroughly successful.

On the outskirts of some of our large cities of late years there have been many attempts made to cheapen the mortice and tenon frame. Economy certainly has been introduced, but at the expense of strength and security. We have seen sticks three by five inches used as posts for two story buildings, having a tenon on each end, and ten mortices cut in its length to receive the girts and braces—in other cases the braces are beveled to the angle and nailed to post and girth. Others introduce some peculiarities of the balloon frame, but as a general thing these frames are very inferior to the genuine balloon frame, and cannot be erected at so low a cost, and do not possess those qualities of strength and security. We have seen mortice and tenon frames in the upper part of New-York city that are as light in every particular as the balloon frame, and every way inferior—inferior because the original strength of the timber is cut away, and the thorough basket-like system of tying, cross tying and diagonal tying not being used. An ordinance should be passed requiring such buildings to be put up with a balloon frame, for two reasons; one is the buildings would be stronger and safer; the other is that it would be economy for the owner.

We have seen it stated* that "the most prominent fault of the balloon frame is the dependence put on nails," that "it is liable to get out of place and constantly grow weaker by the corrosion of the nails, and the wearing of the nail holes." Upon the same principle the most prominent fault of the Niagara Suspension bridge is the dependence placed on the small wires that form the cables.

Corrosion of nails in permanent work is considered desirable, and adds much to the force required to draw a nail. We have sometimes recommended the use of green timber or studding to produce this very effect.

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* Patent Office Report 1859.

Wearing of the nail holes is an objection we cannot answer. We confess our inability to see how it can be produced, a case of this kind not having occurred in our practice. We have examined balloon frame buildings that have been erected 10 or 12 years, in exposed situations, without discovering any defect of this kind; rigidity is a principle of this style of frame, and the objection may be urged more forcibly against the old style. The balloon frame may be confidently relied on in the erection of every description of wooden buildings; there are, however, cases where it is not practicable to construct without making some use of the old fashioned principle of framing or use of heavy timber; for instance, a barn built on piers will require heavy sills; wide openings as sheds, doorways, &c., require heavy lintels, on the same principle that a bridge of 200 feet span must be built stiffer and stronger than if it had a pier every ten feet. Balloon framing requires a solid foundation for each stud, as each stud runs through the building, supporting its share of each floor and rafter, and will not admit of extra wide openings without a heavy lintel to support the weight above.

We see no objection whatever in the way of freely adopting the balloon frame, and very much can be said in its favor; it is absolutely safe and secure, and its economy a strong recommendation. We are willing to risk a well earned reputation in advocating its merits.

Geo. E. Woodward,
Architect and Civil Engineer, 29 Broadway, New-York.

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NEW WAY OF RAISING CELERY.

The last number of the Horticulturist publishes a communication from "Fox Meadow," on the cultivation of celery, according to a "new theory," and which has proved very successful—single sticks having been grown, and after being washed and dressed for the table, have weighed *eight pounds!* The practice is undoubtedly an excellent one, but the theory needs crutches,—inasmuch as it includes the notion that the leaves "condense *moisture*" and send it down to the roots for their benefit. This is the same error as the old one that weeds shade the soil and keep it moist, when as every careful observer knows they pump up and throw off moisture from the earth at a rapid rate, which is the reason that the earth will be always found much drier on the removal of a rank growth of weeds, than where the soil is bare and exposed. The author of this theory does not *ridge up* celery, because the ridge throws off the water from the roots. Now if he will examine his celery roots carefully, he will find that the fine white fibres, of which they consist, have extended as far from the plants as he has made the mellow and composted soil, and that consequently ridging, if it had any sensible influence in this direction, would only tend to throw the water at the end of the rootlets, where it is wanted. He proposes to "copy-right" this theory, but we think he may as well omit it at present. There is one part of it, however, that is correct, but not entirely new, and on this his success depends, namely, that plants, and celery especially, grow and flourish with plenty of water —and this brings us to the practice, which is no doubt excellent, and which we give in substance:—

A bed is formed six to twelve feet wide and as long as convenient; the soil is dug out nine inches deep and thrown on each side; the basin thus formed is filled nearly full of old manure, which is then thoroughly incorporated into the soil below; set out the plants nine by twelve inches over the whole surface; soak it thoroughly, and shade for a few days. Then make an embankment around this bed a foot high, so as to keep it constantly saturated with water. Manure water or guano water is recommended; but perhaps the stratum of nine inches of old manure, would manufacture enough of this, when the water is let on. The plants, as they grow, are merely loosely tied up with bass matting; and the young suckers and small leaves at the base, are removed. The trench or bed must never become dry—there should always be a puddle there. It is earthed up only three weeks before needed for use—any celery will blanch as white as a lily in three or four weeks. For this purpose, the soil thrown out in excavating the bed is returned. Late in autumn the whole bed is covered with forest leaves a foot or foot and a half thick, with a few cornstalks to prevent their blowing away. From this bed the celery may be readily obtained at any time, fresh, sweet, and crisp, during the winter.

This we have no doubt is an excellent method of raising and protecting celery—the mode of raising is founded simply on the principle of giving plenty of manure and plenty of water, and requires a large supply of water at hand—and that of covering, which has been practiced before, or the well known protective power of successive layers of dead leaves with their numerous thin interposed strata of air.

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[For the Country Gentleman and Cultivator.]

PEA-NUT, OR GROUND PEA.

R. T. Brooks asks for information as to its culture, and as it is grown commonly in the south, I will give the information. The peas are hulled or the shell broken before planting—the ground prepared as for corn, rows three feet apart, and the seed dropped about one foot apart in the drill. The after culture, with a view to keeping down grass or weeds and the proper tilth of the soil. Bedding or hilling is not to be *practiced.* The plant is unlike any of the pea family in every respect. It has no bush or vine, but projects its limbs, horizontally, upon the surface of the ground, in length varying from one to three feet, and in all directions from the center or root. These limbs bloom as they grow, and in this respect are unlike any other plant with which I am acquainted. The bloom (small yellow,) rises on a slender stem and opens to the sun. After the germ is impregnated, the stem turns down to the ground and projects the young pea under the surface from one to three inches, where it grows to maturity. It requires clean culture and a loose soil. It is most commonly planted on our poorest land, for the reason that it makes more on that kind of land than any crop cultivated. We plant in March or April, and gather after frost. Yield from one to two hundred bushels per acre, measured in the shell, which is considered two-thirds of the bulk. Time to mature the crop, six months. We are indebted to the African for this valuable pea. Their name for it is *gouber;* the Indian name, pindar. P. T. Graves.

Lownds Co., Ala., July 31, 1860.

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[For the Country Gentleman and Cultivator.]

Ginger Cakes—No. 1.

One pint of molasses.
One cup of butter.
One tablespoonful of saleratus.
One teaspoonful of alum, each to be dissolved in cup half full of boiling water.
One tablespoonful of ginger, and flour enough to roll out in little cakes. M. H. K.

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A Large Milker.—About a month ago we published (p. 29) the amount of Milk produced in five days milking of several Ayrshire cows, in competition for prizes offered in Scotland by the Duke of Athol. An extract from a Scotch paper of later date, states that the cow which then stood first, yielding an average of 26 lbs. 5 oz. of milk in each of 10 successive milkings, "improved wonderfully in the amount of produce after she was put on the grass. She lately gave the astonishing quantity of 75 imperial pounds, or 7½ imperial gallons of milk per day for several days in succession. The largest quantity at one milking was 39 pounds."

[For the Cultivator and Country Gentleman.]

GOOD WHEAT CROPS.

Near Geneva, July 24th, 1860.

Messrs. L. Tucker & Son—Along with this you will receive a sample of my Mediterranean wheat of this year's growth. I think the sample superior to last year's, more particularly in the color than in anything else. I never saw Mediterranean wheat as fair as this. It is wonderful how it has improved in quality since I first sowed it. When you have examined, please hand it to my friend Col. Johnson to place in his State Rooms, and if he gets a better sample I would be pleased if he would let me know it. I may possibly send samples of the May wheat and Soules. They are both very fine. Mr. Swan has a very fine crop of Soules. The land was manured for the previous crop (oats,) then summer fallowed, and subsoil plowed before sowing the wheat. It is impossible to tell the yield until it is thrashed and measured, but I am satisfied that it surpasses his crop of Soules last year, and that gave 41 bushels per acre. In 1853, this same field, before it was drained or manured, gave not over 5 bushels per acre, when my drained and manured land gave nearly 29 bushels. Now I think it probable it gives a larger yield than ever I had. It ripened remarkably slowly. Was that owing to running the subsoil plow some ten inches below the first plowing, which was all of eight inches deep? Whatever was the cause, it is a remarkable crop—straw not long, but the sheaves almost as heavy as a hickory log of same size. Manure and good cultivation will do wonders, and manure will hide a multitude of faults in the cultivation. We will have all the wheat in that field (25 acres) in the barn to-morrow, if fair weather. We have had rather an anxious time in hay and harvest, having had great rains, yet I think the wheat will be all safe after all.

Truly yours, John Johnston.

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[For the Country Gentleman and Cultivator.]

Soil, Crops, and Fruit of Southern Illinois.

I enclose you a statement giving a pretty accurate description of Egypt. Fruit growing is beginning to receive much attention here. Eastern men are planting extensive peach orchards of choice varieties at or near the stations of the "Illinois Central Railroad." Apples and pears are being planted considerably also, and bid fair to do well. Taking into consideration the facilities for *marketing*, and the adaptation of the *soil* and *climate* to the growth of fruit, and I think Southern Illinois offers fully as great inducements as any locality this side of the Rocky Mountains, for peach growing, especially.

The soil of this region, especially in the timbered lands, is unsurpassed in productiveness; it is light and easily cultivated; the subsoil is of great depth and richness, capable of receiving and retaining moisture for a long time, and, as a consequence, the crops are but little affected by drouth.

Winter wheat is the staple crop; the yield is from 20 to 40 bushels per acre, of an average weight of from 64 to 66 lbs. to the bushel. Oats, rye, barley, buckwheat, millet, red clover, and timothy, are excellent crops. Indian corn is grown abundantly in all parts of the country, and yields from 50 to 80 bushels per acre; cotton is grown in the southern counties, but for domestic use only; tobacco is extensively cultivated in a few counties as an article of commerce; Irish potatoes grow well. The soil and climate are peculiarly adapted for the growth of the sweet potato, immense crops of which are raised.

Apples do well, and are a certain crop; peaches are unsurpassed for yield and quality; the soil and climate are eminently adapted to the growing of grapes; pears, cherries, plums and quinces do well.

Limestone and brick clay abound; quarries of superior sand-stone, both red and white, suitable for building purposes, are found in several of the southern counties; inexhaustible beds of bituminous coal, in strata from five to eight feet in thickness, underlie many portions of the State. In Southern Illinois many mines are now worked, and the coal sent to market by railroad and river.

Good water is generally found by digging from twenty to forty feet deep. In the hilly country good springs are numerous.

In the fifteen southern counties of the State there is but little prairie; the surface in some parts is very hilly and broken, but generally agreeably undulating; swamps are not found except occasionally in the extreme south, on the low grounds near the Ohio and Mississippi rivers. This portion of the State is covered with a heavy growth of white, black, red burr and post oak, yellow poplar, hickory, ash, gum, sugar-maple, walnut, hackberry, pecan and other timber, with an undergrowth of dogwood, sassafras, pawpaw, red-bud and innumerable wild grapevines.

The climate is temperate; there is neither the protracted cold of the north, nor the sultry heat of the south. The thermometer in the shade rarely indicates a higher degree of heat than 90, or a lower than 10 above zero. The ground is invariably clear of frost by the 1st of March, and in good plowing condition during the same month. Ordinarily the wheat harvest begins about the 10th of June, thus giving to the farmer several weeks advantage over his brethren of the north, in marketing his wheat. The autumn months are dry and pleasant; frost rarely appears before the 1st of November, nor snow before the 1st of January.

A. Babcock.

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PLOWING IN CLOVER—LIME.

Some discussion on the policy of plowing in clover, buckwheat, rye, &c., as a manure, has recently taken place, in which examples of both good and bad results are given. In reply to the statement that there was liability (if the amount of vegetable matter turned under was large,) of souring the land by acetous fermentation, the Homestead says that slaked lime, either sown before plowing, or strewn along the furrow, or better applied both ways, is a certain preventive from any injury by this cause. "The result is a quick, and so to speak *sweet* fermentation, and a rapid conversion of the whole of the vegetation into good manure." Ashes are valuable for the same purpose.

Another writer on this subject, in the N. E. Farmer, thinks that "in plowing under a heavy crop of clover for wheat, or any grain or farm crop, instead of turning it under when in the blow, I think it would be better to wait till the crop is about half ripe, or half the heads are dead. In this way a good share of the acid would have left the stalk, so that decomposition would readily take place without at all souring the soil."

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Hardiness of the Pear and Peach.

Eds. Cult. and Co. Gent.—As I am preparing to plant a pear orchard, I take the liberty to trouble you with a few queries:

1. Can the pear as a general thing withstand a spring frost while in bloom or after, without inquiry, as well as the apple, other things being equal? [The pear is more certain in its *crops* than the apple, and less liable to the accidents of the weather, while the *tree* is more subject to maladies. We often have good crops of pears when the apple fails.]

2. If peach trees are kept well cultivated and *shortened in*, and the young fruit thinned out when the trees are too heavily loaded, will they not be less liable to fail in producing annual crops, on account of frost, than neglected trees on the same ground or location? [We have never discovered that this treatment had any influence in protecting the peach from the effects of frost—if any effect is produced, it must be very slight.] A. Babcock.

THE GOAT.

The common Goat is not in much request in this country or in England, but in some other countries, as Syria and Switzerland, herds of goats are kept for the sake of their milk, and in fact almost entirely take the place of the cow. The most celebrated variety of this animal is the Cashmir goat, which furnishes the beautifully fine wool from which the costly Cashmir shawls are made. The shawls bear a high value even in their own country, but in Europe the price is much increased by the various taxes which are paid in every stage of the manufacture—the average number of taxes paid on each shawl being about thirty, several of which are limited only by the pleasure of the collector. So says Wood's Natural History.

There is a popular fancy that goats, kept in stables with horses, improve the health of the latter. Bell's British Quadrupeds, in referring to this notion says that although seemingly absurd it is "found upon reflection to have some foundation. All animals are kept in better temper and greater cheerfulness by the presence of a companion, than in solitude; and the active and good humored goat may, in this way, really perform the benefit which has been attributed to it upon mistaken grounds."

It is said also that goats can subsist upon vegetables that are noxious or even poisonous, to other animals. If so, it is probably a part of the great creative scheme to provide for the consumption, and the keeping within necessary limits, those species of vegetables which having their special utilities, would acquire an *undue preponderance* if not kept in check. Partington's Cyclopedia remarks:

In feeding, *goats* are very indiscriminate, and many plants which are not only shunned by other ruminating animals, but act as poison to them, are not only eaten with impunity, but relished by them. There have been instances in which tame goats have chewed tobacco; and, in the wild state, they eat the most bitter and narcotic plants, such as euphorbium, hemlock, henbane, and even digitalis, without suffering any injury. Few plants are more disrelished by cattle than the common rag-weed, and therefore the pastures on those lands in upland and humid situations are very much infested by it; but goats clear it off, if allowed to browse the plants before they come into flower. There are many of the *compositæ* which are the pests of our pastures, and which are, generally speaking, biennials, making roots the first year, and bearing flowers the next, which might probably be cleared off by pasturing with goats at proper times. The alteration with each other of animals, one set of which can eat the plants that are disliked by another, is an important point in the economy of our grazing districts, though it does not appear to have received that attention to which it is entitled.

Produce of Milk, Cheese and Butter per Cow.

The following statement, from Morton's Hand-book of Dairy Husbandry, gives the produce per cow of Mr. J. T. Harrison of Gloucestershire, England:

The following are the results of my experience in dairying the last few years. In 1857, having plenty of water, we made all the cheese with the machine, and it proved the most profitable year. I milked 55 cows; the quantity of milk made into cheese was 31,728 gallons, or 577 gallons per cow, besides the milk expended in weaning 43 calves:—

	£	s.	d.
The actual return for cheese was	615	0	0
do. do. butter was	182	6	10
do. do. milk sold and used was	6	0	0
do. do. whey, 220 hogsheads, at say, 6s	66	0	0
do. do. rearing 43 calves was	43	0	0
Total	£912	6	10

or about 16l. 10s. per cow.

The following are the returns of other years, including the same particulars:

		Dairy Cows.	Per cow. £	Per cow. s.	Cheese per cow. lbs.	Butter per cow. lbs.
	For 1855	30	15	0	361¾	62
	1856	45	16	0	423½	64
Machine made,	1857	55	16	10	459	62
	1858	52	12	5	387½	38
	1859	60	13	5	366¾	39

In 1858 and 1859 we could use the machine only about two months for want of water. The diminished yield in these two years I attribute in a great measure to the excessive dryness of the season; other circumstances affecting the cows likewise contributed to the result. In 1858 the price of cheese was not so good, and the quality was inferior, especially that made during the autumn.

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A PROFITABLE DAIRY.

A subscriber of the Genesee Farmer sends to that paper the following statement as to a small Dairy belonging to Mr. Edward Hoyt, that took the first premium at the Delaware County Society's Annual Meeting.

This dairy consists of six 'native' cows, of the following ages: two 7 years old, one 6, one 5, and two 3 years old—calved from the 10th to the 26th of March, inclusive.

Amount of Butter made	1,230 lbs.		
do. do. sold	1,085 "	$230.61	
Butter used in family	145 "	30.45	
Pork made from milk		30.50	
Calves and Colt, raised by hand		18.50	
One Veal		5.50	
Three Calf-skins		2.40	
Milk used in the family		10.50	
			$328.46
Deduct expenses, freight, corn, etc.			20.26
Net income from all sources			$308.20

After deducting one-quarter each for two 2-year old heifers, the net profit per cow—5½ cows—is $56.04.

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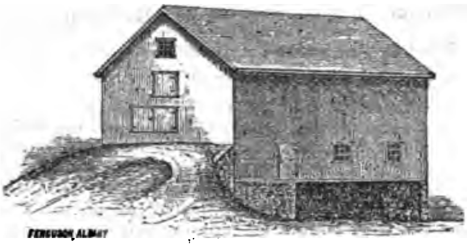
Rats in the Granary.

A gentleman whose granary and premises generally were overrun with rats, writes to the editor of the North British Agriculturist, that he had tried "all the various nostrums which vermin destroyers and rat killers recommended," and that all, without exception, had miserably failed. They did, indeed, manage to kill several, but in a short time the rats seemed to swarm as thick as ever. They were so plenty and so tame that they would feed with the pigs in the same trough, and crouch around and even on the backs of the cattle when resting in their stalls at night. Even shooting a few of them did not seem to scare them away, or sensibly thin them. He was greatly distressed and almost desponding of ever getting quit of them, when a neighbor recommended a trial of cats. Having got a cat and two kittens he made a crib for them in the granary, and had a carpenter cut circular holes in every door on the premises. The result was that in a short time his place was perfectly clear of rats. For several months past not a rat has been seen, the cats having now increased to seven or eight.



SIDE-HILL BARN.

Eds. Cult. & Co. Gent.—Having during the summer of 1858, built a barn exclusively for the purpose of storing hay and stabling stock, and it having answered the purpose remarkably well, I send you such a description as I am able to make, and ask you to make such use of it as you please.

The barn is 40 feet long by 26 wide, with a basement 8 feet high; posts 20 feet above the basement; the roof steep, which gives more room for hay, is more durable and stronger if left without purlin support; two middle cross works, which make the girts 13 feet. It is situated on a somewhat steep side-hill, facing the south-east; the basement wall on the north side, and the west part of the south side to the west middle cross work 8 feet high. The wall at the west end is 15 feet high, the basement part of which is built *very strong* of heavy stone, so that the upper part of it (7 feet high,) which is faced one foot back or west of the basement wall, (for a cross sill to rest upon,) may rest *firm*, and *never be moved*.

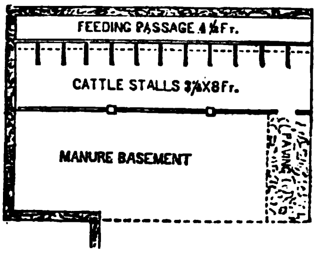


Fig. 2—Basement.

The post which is in the east middle cross work, south side, is supported by bridge braces, (shown in the view by the dotted lines,) with bolt at bottom to hold up the sill, which gives free access to the manure which is kept in the south part of the basement; in the north half is a row of stanchion stables for 12 cattle, facing the north, towards a foddering pass wide enough to fodder the cattle when in the stable. One row of cattle are kept over the manure basement facing the north, which, with a foddering pass, occupies 13 feet, or half the width.

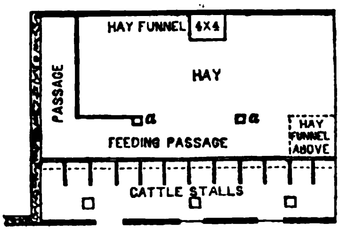


Fig. 3—Second Story—a, a, posts supporting hay floor over stable, passage, &c.

The earth is filled in and thoroughly packed up to the wall at the west end, and graded to drive the loaded teams with the hay, to be pitched into the barn through ample sized doors of different height; much of the hay is thus pitched down into the barn, and it is certainly "put into place" with comparatively little labor. The barn is filled with hay, excepting two funnels through which to pitch the hay down to the two foddering passes; and by allowing a reasonable time to settle, will hold 35 tons of hay. Our cattle are three year old steers, for fattening the following season when four years old. I think there are very few barns which contain so much practically valuable room under the same proportion of roof, or expense of building, and repairs for the next 100 years. The barn is built thoroughly but plainly, and I think at a cost of $400. As this plan is essentially different from any I have ever seen, and thinking it might suggest some thoughts of value "to whom it may concern," I place it at your disposal. Wishing you and your co-laborers success in your efforts to dignify labor and improve the homes and homesteads of our countrymen, I am, S. J. Averill. *New Preston, Ct.*

We have drawn a perspective view and plans as nearly correct as we were able to understand the rough sketches furnished us. If we have made any material error, our correspondent will please make the necessary corrections.

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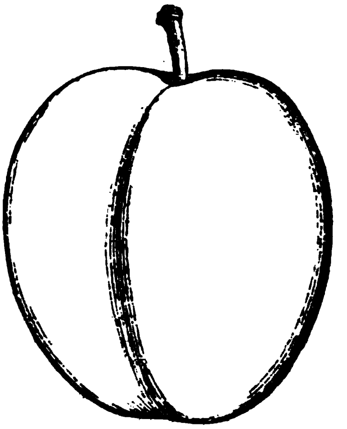
NEW PLUM FROM NORTH CAROLINA.

L. Tucker & Son—By this day's express we forward to you three seedling plums of this section of the country, from the extensive nurseries of Westbrook & Co., in our immediate vicinity. Will you please look at and examine them, and if you think worth while please notice them, as the variety is certainly new, and they are now propagating—honestly believing that this variety is superior almost to any other, both in regard to taste and size. They call them the Blum plum. James Sloan.

Greensboro, N. C.

The plums when received were partly decayed, but enough was left to show their excellent quality. The outline, which we have made, shows the size and form. In color and shape this plum has considerable resemblance to *Nelson's Victory*, to which it appears to be allied. The following is a description: Size full medium or rather large, oval, color dull orange, with numerous small brown dots, suture distinct, stem short, cavity narrow; flesh yellowish brown, fine grained, very juicy, quality "very good."



Blum Plum.

We suppose it to be mature in North Carolina about the middle of 7th month; July—it would doubtless be some weeks later here. The variety is certainly worthy of further attention.

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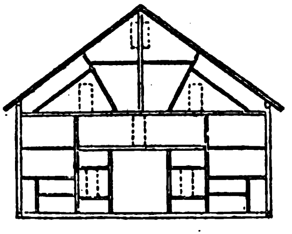
Renovating Old Apple Trees.—"Dig about it and dung it," says a brief writer in the Genesee Farmer, was the scriptural way of renewing barren trees. Success attends the same method now. Dig "*about*," certainly as far as the branches extend, but "do not dig too deep, or injure the roots unnecessarily. Stirring the surface soil frequently, is what they want. Try that, and you will be amazed at the renovation you work in old apple trees."

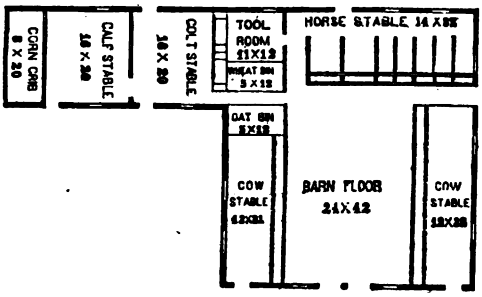
[For the Country Gentleman and Cultivator.]

PLAN OF A BARN.

On the accompaning sheet I send you a rough sketch of my barn, and if you consider it worthy a place, you are at liberty to use it. I have studied at it for several years, and finally settled upon the present plan. As it is impossible to build a *model* barn, I have arranged this to suit my own farm. Size, 56 by 48 ft. The L. 20 by 40. Length of posts on main barn, 18 ft. Pitch of roof, 1-3. Posts in the L., 12 feet. Projection of rafters, two feet. Rafters framed into perline plate, making two sets. King rafters over each, bent four by six inches. King part 16 10-12 feet from centre of ridge, framed into the king rafters and into the upper beams, as you will see in the cut. In the whole building there are 132 braces and 600 pins. Space over the cows, seven feet in the clear; over the main floor and horse stable, nine feet. Thus we have room for twenty-two cows, nine horses, tool room, and two grain-bins, and a large space for carriages, and room above for 35 or 40 tons of hay.



Elevation of Frame—dotted lines Windows.



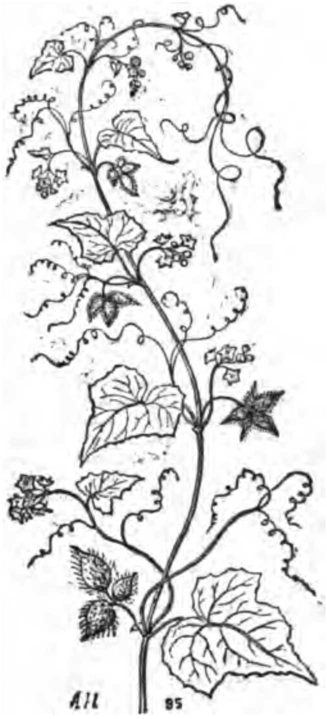
The colt and calf stable and corn-crib are convenient. Under the main floor is a large cellar to receive roots, entered by a trap door. From this cellar the roots are easily thrown upon the floor and cut as required, and fed very handily. In this barn I can feed and milk my cows, and feed horses, colts and young cattle without going out of doors. I need no cellar to receive manure, as I make a practice of hauling it on to my fields early in the spring in its fresh state. In the center of the ridge is a cupola four by five feet, and eight feet high, with blinds which serves as a ventilator. From the top of this the lightning rod extends ten feet, and then down to the ground. Outside boards of barn planed and battened. Bottom of corn-crib two by four inch plank, one inch apart. In the inside, boarded on to the girts by leaving one inch space. Upon the outside, four inch boards planed and placed three-quarters of an inch apart; thus the outside boards are saved from the pressure within. All to be painted. A cistern to be built between the L. and main barn. Cost of materials and carpenter, $1,200; hauling of materials and boarding of hands not counted. C. G. Taylor.

Rock Island Co., Ill.

A Troublesome Kentucky Weed

Eds. Co. Gent.—Enclosed find samples of a weed which gives us some annoyance here. Can you tell me its name? T. R. Kentucky.

The One Seeded Star Cucumber (*Sicyos angulatus.*) Below we give an engraving of this weed from Darlington's "Weeds and Useful Plants." He says of it:



"This cucumber-like vine has found its way into gardens where it is a nuisance rather difficult to get rid of. It is, according to Dr. Short, a great pest in the rich corn-fields of Kentucky, 'springing up' after the crop 'is laid by,' and so extending from one corn-stalk to another as to make it extremely difficult to pass through the field.' The Balsam Apple (Momordica Balsamina, *L.*,) the red fruit of which, made into a tincture, was formerly used as an application to wounds, belongs to this section, and is sometimes cultivated in gardens."

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[For the Country Gentleman and Cultivator.]

CUTTING CORN STALKS.

Eds. Co. Gent.—I send you for publication, if you please, some recollections of an accidental experiment in topping corn. The result is different, I think, from other and better experiments of the same kind.

In 1856 I had a piece of corn containing one and a half acres—soil and culture all alike. After the first of September I commenced cutting from one to three rows daily, until the piece was two-thirds cut; the remaining third ripened with the tops on. At harvest I commenced harvesting at the side that I did to cut stalks; four rows made a load; each load was husked and measured separately. There was an increase in quantity of corn every load as far as the stalks had been cut. The first four rows yielded at the rate of eighty bushel baskets of ears per acre; the first half acre at the rate of one hundred and two baskets per acre; the remaining acre one hundred and nineteen baskets. The stalks had become so dry that the cattle would not eat them readily when I stopped cutting. There was plenty of ripening weather that fall and no high winds. Edward Willis. *Kingston, Mass.*

Another Short-Horn Sale at Good Prices.

Mr. BOLDEN, whose Short-Horn herd ranks among the first in Great Britain, recently finding himself somewhat overstocked, determined upon a sale, and, in order that he might not rest under the imputation of weeding out the least meritorious of his animals for the occasion, offered one family or tribe, the "Waterloo" cows and bulls, which with a few others, constituted a catalogue of 29 head. This tribe, remarks the *Mark Lane Express*, "was derived from the Kirkleavington herd; and, therefore, chiefly crossed as it has been in the case under our notice with the bulls of pure 'Bates' blood, may be reckoned as belonging to one of the most valuable families of the Short-Horn breed. That they were so held by the bidders at the Springfield Hall sale on Thursday last, is shown by the following result:" The average for the 29 animals sold was about $435 per head, (exactly, £87 17*s*. 6*d*.) The highest price obtained was for "Waterloo 20th," in calf to 3d Grand Duke, which brought 165 guineas, say $825, now 3½ years old.

Our contemporary, above quoted, congratulates the English public upon one

"circumstance of this sale which challenges our gratification and sincere satisfaction; and this is, that all the lots appear destined, for the present at least, to remain in the country. There were no foreigners nor Americans to dispute with English breeders the possession of these valuable animals.

"It was a remarkable feature of this sale, that whenever a pure Bates was offered, the bids were as brisk and spirited as the most fastidious auctioneer could wish; whereas, when other blood was introduced into the ring, the offers were comparatively languid, and the auctioneer's exertions correspondingly great. Even the influence of the 3d Grand Duke's bulling or paternity told with a manifest and unmistakeable weight on the biddings; and, notwithstanding the individual merits of 'Prince Imperial,' and the acknowledged excellence and well-deserved celebrity of the Warlaby herd, it must be admitted that it was the Kirkleavington blood that commanded the greatest eagerness on the part of the buyers, and, consequently, the highest prices."

☞ In the notice of Mr. BOLDEN'S SALE above, we have quoted the Mark Lane Express as authority for the statement that "whenever a pure Bates was offered" the demand was the brisker and the bidding higher for the presence of the Kirkleavington blood. The Irish Farmers' Gazette is now at hand with the details of the Kingsfort Sale, July 18—the prices at which are referred to as affording conclusive testimony exactly in a different direction. We had the pleasure of visiting last summer Mr. CHALONER'S herd at Kingsfort, and found it well calculated, as the Gazette remarks, to "sustain the long established reputation which Mr. Chaloner has earned as a "Short-Horn breeder." Our contemporary continues as follows:

> Another point was also very clearly brought out, to wit, the great value set upon the "Booth strain" in this country. So much so was this the case, that throughout the entire catalogue the greater the number of "Booth" crosses which the pedigrees exhibited, so much the more was the respective values of the animals enhanced.

In fact "none of the cattle sold at Mr. Bolden's Sale, reached the prices obtained at Kingsfort," but the average was not materially different. Forty-one cows and heifers were disposed of, averaging £86 3*s*. (say $430) per head, and eight bulls, averaging £87 18*s*.—total, 49 head. At Mr. Bolden's Sale, there were only 29 head sold, at an average of about $435, while the average of an equal number at Mr. Chaloner's, selecting the 29 highest, is about $565. "Miss Warlaby," near eight years old, went up to £372 15*s*. (say $1,860) and "Sheet Anchor," a bull-calf of 15 months, was sold for £346 10*s*. (say $1,730.)

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IMPORTANT INVENTION!—A new machine for milking cows, "to be worked by the motion of the cows tail!" has been *imagined* by a farmer in Mass. *Artificial flies* will furnish motive power when the fly season is over. So says a writer in the New-England Farmer, who seems disposed to be jocose on the "march of invention" in applying mechanics to agricultural machinery.

Methods of Laying Out the Flower Garden.

A few years since the only method of planting the flower borders was that of setting each plant by itself, and in most cases contrasting them both in color and habit as strongly as possible. Now the fashion is to plant a single variety in beds of small size cut out of the grass in patches in the borders, or in case of a geometrical arrangement of the flower garden, in the irregular beds of that system. Both the promiscuous system and this have their advantages. We think the former better calculated for small gardens, and the latter decidedly preferable for large ones. In the small gardens it is impossible to afford room enough for so many beds as would be required even in a moderate selection of sorts. It is often recommended, we know, to make a fine display of a few sorts rather than to attempt the growth of a great many kinds in a small space; but every true lover of flowers *must* have all his old favorites, and as many new ones as he can possibly find a little bit of room for. A large garden tastefully laid out with beds cut out of the turf, and each one appropriated to a particular variety and color, is very ornamental indeed, and is much more showy and conspicuous, and at the same time is more methodical, needs less care, and looks less *cluttered up* than if laid out in the other manner.

Nothing can be more brilliant than a bed of scarlet Geraniums, Defiance Verbenas, or any other high colored flower; nothing more delightful than the fragrance of a mass of Heliotrope, Mignonette or Pinks. For this purpose there are many plants that are very desirable. As a general rule they should be dwarf in their habit. Large, tall growing plants, if planted in masses, should be in large beds. Nothing can be better than Verbenas of the various colors, Phlox Drummondii, Portulacca, Candytuft, Asters, Petunias, Heliotropes, Mignonette, Pinks, Sweet Williams, &c.

Even in a garden planted promiscuously, it is better to put several plants of the same sort together, rather than to have them to stand singly. For instance, Asters and Balsams should be planted in groups of three to six or eight plants. Those which grow tall and bushy, such as Roses, Salvias, &c., may be planted singly. All herbaceous plants should be in stools of not less than a foot in diameter in the promiscuous borders, or in smaller stools in beds, a foot or two feet apart, according to the sort.

A mixed system of arrangement may be adopted with good effect in large gardens enclosed with walls or close fences. Cover the wall or fence with climbing plants, as Honeysuckle, Virginia Creeper, Clematis, Trumpet Vine, &c., and make a border around the whole garden three to six feet in width, for herbaceous plants, dahlias, hollyhocks, &c. Then in the turf cut out small circular or elliptical beds, for planting with single varieties of showy annuals or bedding-out plants. G. B. H.

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SHOEING HENS.

We observe a recent notice in some paper, of the practice of making woolen shoes (or rather boots) to prevent hens from scratching. A flock of fifty fowls, like our own, would require considerable labor in the manufacture of a hundred woolen boots, which might be worn through in a short time and need renewing. It is much better we think, to procure a breed that will not scratch. There is another point of importance—that is to keep the animals well fed, during the season when scratching is most feared. We keep from thirty to fifty of the White Shanghai,—a very quiet, well behaved, and profitable fowl,—and adopt the most economical mode, namely, regular feeding with grain,—and although there is no barrier between their ordinary range and the kitchen garden, they do not scratch yearly enough to do twenty-five cents damage.

SOUTH-DOWN SHEEP.

☞ As the importance of devoting more attention to SHEEP begins to grow in appreciation with American farmers, they become willing to pay higher Prices for better Animals, and to select more judiciously the kind of Animal suited to their wants. Among the different Breeds which have been imported and thoroughly tested here, the SOUTH-DOWN occupies a prominent and advancing position in Public favor. Especially where an accessible Market is afforded and pasturage is good—for example along the Connecticut Valley, as was recently noted in the COUNTRY GENTLEMAN—and, indeed, wherever winter feeding can be made to increase the Profits and add to the Manurial resources of the Farmer, the South-Down must be regarded a prominent candidate for his attention, and a cross of it upon common ewes, or upon those previously possessing a strain of almost any other improved sort, can scarcely fail to add enough in Money value to the Lambs of a single season or two, to remunerate him for the additional Expense of obtaining a Ram of pure blood.

JONAS WEBB, of whose Letting in 1859 we gave an account from personal observation, has just had another of these interesting anniversaries, as previously advertised in our columns. Again it is an American who has overtopped all English competition, and by the bids of Mr. J. C. TAYLOR of Holmdel, N. J., (through an agent,) the Ram which received the highest award of those exhibited by Mr. W. at the Royal Society's Warwick Show, and which was run up on this occasion very nearly to *six times the average price* per head of the whole number let—is coming over to add its *prestige* and influence to a flock which already stands well in the character of the blood it includes. With Messrs. THORNE, ALEXANDER, SHELDON and others, Mr. Taylor is doing much to place within the reach of the Farmers of the United States just that kind of improvement of which they are now perhaps most in need.

The Ram in question was only surpassed at the Warwick Show (in the awards of the Judges), by one exhibited from the flock of the Duke of Richmond. There is an impression that it is very well that Webb's South-Downs should get a second place now and then, for he always more than makes up for the loss just as soon as an opportunity offers—at least such has been the case frequently heretofore, and now we find that at Canterbury he is quite recovering his old way of sweeping all he wants, for the telegraphic dispatch from that Exhibition to the Mark Lane Express, just received, reads thus:—"*Southdown Rams: Jonas Webb, all the prizes for both classes.*"

As Mr. Taylor is thus fresh, in a certain sense, from the pick of the Babraham flock, its successes are particularly a matter of interest here, nor can we pass by without a word the fate of the other rams offered at the recent Letting. There were 60 let, which is several more than were disposed of last year, at an average a little lower than that of 1859, but just about as much higher than the average of '58—namely, £23 0*s.* 8*d.* now, against 54 head last year at £25 9*s.* 10*d.* per head, and 61 the previous season at £20 19*s.* 3*d.* The highest price for any animal, that paid by Mr. TAYLOR*—is 128 guineas, say $630; the next highest 70 *gs.*, and there are only three more which exceeded 50 *gs.* each. Among other familiar names on the list of successful bidders, we notice that of Mr. Fulcher for Lord Sondes. There were also several French and German gentlemen among the competitors.

[For the Country Gentleman and Cultivator.]

HOW TO DESTROY IRON WEED.

MESSRS. EDITORS—I observe in a late no. of the Co. GENT., an inquiry as to the best method of exterminating the iron weed. Col. G. W. HAMPTON of this county, bought a farm on which was an excellent piece of meadow ground, which had become so thoroughly over-run with iron weed before he bought, that his predecessor had in the fall previous cut down and hauled them out by the wagon load, and deposited them on the poor points.

When Col. Hampton got possession of the place, he employed a man when the weeds were about knee high, to go over the meadow with a sharp scythe and clip them off about mid-leg high, after which they would bleed profusely, but would not die. At mowing time they were cut off close to the ground. Under this course of treatment, he informed me that in three years there was scarcely one to be seen in his meadow.

In this course of treatment Col. H. is fully sustained by John Woodfin, Sen., Esq., who thinks the bleeding so copiously and so frequently, gradually enfeebles this pest of the farm until finally death ensues. REAGAN.

Rims Creek, N. C., July 23.

[For the Country Gentleman and Cultivator.]

RECIPE FOR ELDERBERRY WINE.

EDS. CO. GENT.—In no. 3 of the present volume of the Co. GENT., "A. B. R." inquires for a recipe for making Elderberry Wine. My mother says the following is *first-rate:*

The quantity of fruit required, is one gallon of ripe elderberries for every two gallons of wine. For ten gallons wine take five gallons berries, boil them in five or six gallons of water, then strain the liquor, and whatever the liquor proves short of ten gallons, make up as follows: Add water to the pulp, stir it about and strain to the rest. Add thirty pounds sugar and two or three ounces hops. Then take three-quarters of a pound of ginger-root bruised, five ounces cloves, one of cinnamon, and put them together in a bag and tie loosely. Put the bag with its contents into the previous mixture, and boil two hours; when quite cool, ferment with yeast as you do beer. In two or three days draw the liquor off into a cask, suspend the bag of spices by a string not long enough to reach the bottom; paste over stiff brown paper. It will be fit for use in two months. F. A. R. *Maine, Ill.*

[For the Country Gentleman and Cultivator.]

TYMPANITIS—HOVEN IN CATTLE.

IN ANSWER TO W. A., IOWA CITY. — This disease is characterised by distention of the rumen with gas—is a very common affection among cattle, and results from irregular feeding, wet clover, vetches, or in the way W. A. has indicated. A cure will usually be accomplished by giving to the animal twice, two ounces of oil of turpentine, with a pint of linseed oil, and an ounce or two of ginger.

If the distention increases and the beast becomes stupid, introduce the trochar and canula into the side. Choose the most salient point, or equi-distant from the haunch, the lumbar vertebra and the last rib. The trochar is to be withdrawn and the canula is to remain until the swelling entirely falls. Where a trochar cannot be had, the operation may be easily performed with a well sharpened table knife, which is preferable to a pen-knife; the animal to be fed on soft food for a number of days. A proper trochar to use in such cases, is one-half longer and the thickness in proportion, to the one usually employed in tapping the human subject. R. MCCLURE, V. S.

Philadelphia, July 25.

[For the Country Gentleman and Cultivator.]

SWEET PICKLED TOMATOES.

One peck of green tomatoes sliced—six large onions sliced—strew a teacupful of salt over them; let them remain over night—drain off in the morning—then take two quarts of water and one of vinegar—boil them in it 15 or 20 minutes; after boiling put them in a sieve to drain—then take 4 quarts of vinegar, 2 pounds of brown sugar, half pound white mustard seed, 2 tablespoonfuls of ground alspice, same of cloves, cinnamon, ginger and mustard, and one teaspoonful of cayenne pepper—put all in a kettle and cook 15 minutes *slowly*, and you will pronounce them capital I am sure. M. H. K.

☞ The Winnebago Co. (Wisc.,) Ag. Society have their head-quarters at Osh Kosh, where their Sixth Show will be held Sept. 19, 20—President, M. C. Bushnell Secretary, J. H. Osborn.

AGRICULTURAL AND OTHER EXHIBITIONS THE PRESENT SEASON.

NATIONAL.

United States....Cincinnati, Sept 12, 20.
Am. Pomological....Philadelphia, Sept 11, 14.
Amer. Institute....New-York, opens Sept 27.
Horse Exhib'tion..Springfield, Mass, Sept 4, 7.

STATE.

Alabama....Montgomery, Oct 29, Nov 2.
California....Sacramento, Sept 19, 26.
Canada, Lower....Quebec, Aug 18, 22.
Canada, Upper....Hamilton, Sept
Connecticut....No exhibition on account of Cattle disease.
Georgia....Atlanta, Oct 23, 26.
Georgia, (Planters)....Macon, Dec 3, 20.
Georgia, Lower....Savannah, Nov. 22.
Illinois....Jacksonville, Sept 10, 15.
Indiana....Indianapolis, Oct 15, 20.
Iowa....Iowa City, Oct 2, 5.
Kentucky....Bowling Green, Sept 18, 22.
Kentucky Central....Danville, Sept 4, 7.
Kentucky, N. Eastern....Ashland, Sept 18, 20.
Maine....Portland, Sept 25, 28.
Maine Horse Show....Augusta, Sept 18, 21.
Maryland....Baltimore, Oct 30, Nov. 3.
Michigan....Detroit, Oct. 2, 5.
Minnesota....Fort Snelling, Sept 27, 29.
Mississippi....Holly Springs, Oct. 16, 20.
Nebraska....Omaha, Sept 19, 21.
New-Hampshire....Manchester, Oct 3, 6.
New-Jersey....Elizabeth, Sept 4, 7.
New-York....Elmira, Oct 2, 5.
North Carolina....Raleigh, Oct 16, 19.
Ohio....Dayton, Sept 25, 28.
Oregon.... .... Oct 2.
Pennsylvania....Wilksbarre, Sept 24, 27.
St. Louis Ag. and Mechanical Association, St. Louis, Sept 24, 30.
South Carolina....Columbia, Nov 13, 16.
Tennessee....Nashville, Sept 10, 15.
Tennessee, Mid. Div....Franklin, Sept 24, 28.
Vermont....Burlington, Sept 11, 14.
Virginia....Richmond, Oct 22, 28.
Wisconsin....Madison, Sept 24, 29.

COUNTY AND TOWN—MAINE.

Androscoggin....Lewiston, Oct 2, 5.
Franklin....Farmington, Oct 3, 5.
Hancock....Ellsworth, Sept 26, 27.
Kennebec....Readfield, Oct 9, 11.
North Aroostook....Presque Isle, Oct 3, 4.
Piscataquis....Dover, Oct 3, 4.
Sagadahoc....Topsham, Oct 9, 11.
Union....East Sumner, Oct 16, 17.
West Washington....Jonesboro, Sept 27, 28.
Waldo....Belfast, Oct 10, 12.

NEW-HAMPSHIRE.

Belknap....Sept. 26, 27.
Carroll—Ossipee, Sept 19, 20.
Cheshire....Keene, Sept 25, 26.
Conn. Valley....Charlestown, Oct 2, 5.
Grafton....Littleton, Sept. 19, 20.
Hillsboro' (North)....Weare, Sept. 20, 21.
Merrimack....Concord, Sept. 26, 28.
Merrimack River....Nashua, Oct. 10, 11.
Rockingham....Portsmouth, Sept 19, 20.

VERMONT.

Addison....Middlebury, Sept 5, 7.
Caledonia....St. Johnsbury, Sept 26, 28.
Rutland....Rutland, Sept 6, 7.
Windham....Brooklyn, Sept 12, 14.

MASSACHUSETTS.

Barnstable....Barnstable, Oct 9.
Bristol....Taunton, Oct 2.
Bristol Central....Myricks, Sept 26, 27.
Berkshire....Pittsfield, Oct 3, 5.
Essex....Danvers, Sept 25.
Franklin....Greenfield, Sept 27.
Housatonic....Great Barrington, Sept 26.
Hampshire, Franklin and Hampden....Northampton, Oct 4.
Hampshire....Amherst, Oct 11.
Hampden....Springfield, Sept 20.
Hampden East....Palmer, Sept 18.
Lowhegan....Mason Village, Sept 25.
Middlesex....Concord, Sept 20.
Middlesex South....Framingham, Sept 18.
Middlesex North....Lowell, Sept 13.
Martha's Vineyard....West Tisbury, Oct 16.
Nantucket....Nantucket, Oct 11.
Norfolk....Dedham, Sept 27.
Plymouth....Bridgewater, Oct 4.
Worcester....Worcester, Oct 2.
Worcester West....Barre, Sept 27.
Worcester North....Fitchburg, Sept 21.
Worcester South....Sturbridge, Oct 4.

CONNECTICUT.

Middlesex....Middletown, Oct. 3, 5.
Windham....Brooklyn, Sept 12, 14.
Wilton, Town, Sept 4, 5.

NEW-YORK.

Albany....Albany, Sept 18, 22.
Afton....Chenango Co., Sept 12, 13.
Broome....Lisle Village, Sept 11, 13.
Busti Union....Busti, Sept 6, 7.
Brookfield....Madison Co., Sept 26, 27.
Cattaraugus....Little Valley, Sept 25, 27.
Cayuga....Auburn, Sept 12, 14.
Chautauqua....Jamestown, Sept 11, 13.
Chautauqua Farmers' and Mechanics....Fredonia, Sept 26, 28.
Chenango....Coventry, Oct 3, 4.
Chemung.... ....
Clinton....Plattsburgh, Sept 10, 11.
Cortland....Virgil, Sept 20, 22.
Clymer....Clymer, Sept 5, 6.
Columbia Ag. and Hort....Hudson, Oct 2, 4.
Columbus Town....Oct. 2, 4.
Delaware....Hobart, Sept. 26, 27.
Dutchess....Wash. Hollow,
Essex....Essex Village,
Franklin....Malone, Sept 11.
Genesee Valley....Nunda, Sept. 12, 15.
Genesee....Batavia, Sept 18, 19.
Gouverneur....Gouverneur, Sept 13, 14.
Herkimer....Little Falls.
Horse Show....Buffalo, Aug 28, 31.
Livingston....Geneseo, Sept 26, 28.
Lewis....Turin, Sept 25, 27.
Madison....Brookfield, Sept 26, 27.
Monroe....Rochester, Sept 26, 28.
Niagara....Lockport, Sept 27, 29.
Oneida....Utica, Sept 25, 26.
Oswego....Mexico, Sept 18, 20.
Otsego....Cooperstown, Sept 26, 27.
Ontario....Canandaigua, Sept 26, 28.
Onondaga....Syracuse, Sept 26, 28.
Oxford Town....Oct. 2, 4.
Otselic Town....Sept. 13, 14.
Putnam....Brewsters, Sept 25, 27.
Queens....Jamaica, Sept 19.
Rensselaer,....Lansingburgh, Sept 19, 29.
Ridgeway and Shelby....Medina, Sept 12, 14.
Rushville Union....Rushville, Sept 20, 21.
Sangerfield and Marshall..Waterville, Oct 3, 4.
St. Lawrence International....Ogdensburgh, Sept 26, 29.
St. Lawrence....Canton, Sept 26, 28.
Susquehannah Valley....Unadilla, Sep 25, 26.
Seneca....Waterloo, Sept 26, 28.
Skaneateles....Skaneateles, Sept. 25.
Saratoga....Saratoga Springs, Sept 4, 7.
Sherburne Town....Sept. 26, 28.
Smithville Town....Sept. 6, 7.
Tompkins....Ithaca, Sept 5, 7.
Tonawanda Valley....Attica, Sept 26, 27.
Ulster....Kingston, Sept 26, 28.
Union, Monroe Co....Brockport, Oct 2, 3.
Union, Erie Co....Springville.
Union, Jefferson Co....Adams, Sept 12, 13.
Union, So. Cayuga....Sherwood's Corners, Sept 11, 12.
Union, Tomp. Co....Trumansburg, Sep 11, 13.
Westchester....Mt. Kisco, Sept 25, 27.
Wayne....Clyde, Sept 12.
Wayne, Palmyra Union....Palmyra, Oct 2, 4.
Yates....Penn Yan, Sept 26, 28.

NEW-JERSEY.

Somerset....Somerville, Sept 11, 13.
Sussex....Newton, Oct. 2, 5.
Warren....Belvidere, Sept 11, 14.

PENNSYLVANIA.

Allegheny....Pittsburg, Sept 4, 7.
Bucks....Newtown, Sept 25, 27.
Berks....Reading, Sept 25, 27.
Chester....Westchester,
Crawford....Meadville, Sept 18, 20.
Highland....Johnstown, Sept 27, 29.
Lawrence....Newcastle, Oct 2, 4.
Montgomery....Springtown, Oct 2, 4.
Philadelphia....Powelton, Sept 25, 28.
Wattsburg....Wattsburg, Sept. 26, 27.

DELAWARE.

Newcastle....Wilmington,

MARYLAND.

Frederick....Frederick, Oct 16, 19.

VIRGINIA.

Greenbriar.... ...., Aug 31.
Wheeling Island, Sept 11, 13.

GEORGIA.

Hancock....Sparta, Oct 16, 20.

NORTH CAROLINA.

Cumberland.... ....
Macon....Franklin, Nov. .
Sampson....Clinton,
Wayne....Goldsboro,

SOUTH CAROLINA.

Vine-Growers' Convention... Aiken, Aug. 21.

KENTUCKY.

Bourbon....Paris, Sept 4, 7.
Clark....Winchester, Aug 30, Sept 1.
Harrison ...Cynthiana, Sept 18, 21.
Warren....Bowling Green, Sept 18, 20.

TENNESSEE.

Bedford....Shelbyville, Sept 18, 22.
Giles....Pulaski, Oct 9, 13.
Gibson....Trenton, Oct 10, 12.
Maury....Columbia, Oct 1, 6.
Marshall....Lewisburg, Sept 11, 14.
Putnam ...Cookville, Oct 1, 4.
Perry.... .... Oct 16, 20.
Shelby....Memphis, Oct 8, 13.
Sumner....Gallatin, Sept 17, 22.
Smith....Rome, Sept 26, 29.
Warren....McMinnville, Oct 9, 11.

MISSOURI.

Cole....Jefferson City, Oct 1, 6.
Clay... Liberty, Oct 3, 7.
Platte....Platte City, Sept 25, 30.
Newark....Newark, Sept 3, 7.
Lafayette....Lexington, Oct 3, 6.
Central District....Boonville, Oct 1, 5.
S. E. District....Cape Girardeau, Oct 11, 13.
Howard....Fayette, Aug 29, Sept 1.
Osage....Linn, Oct 4, 5.
Jackson....Independence, Sept 4, 9.
Benton.... .... Sept 25, 27.
Saline....Miami, Sept 4, 8.
Bates.... .... Oct 17, 20.
Cass....Pleasant Hill, Sept. 26, 29.
Clinton....Plattsburg, Sept 11, 14.
Gasconade....Hermann, Sept 5, 6.
Franklin....Union, Oct 13, 15.
Marion....Palmyra, Sept 17, 22.

MISSISSIPPI.

Attala....Liberty Chapel, Nov 1, 2.
Choctaw....Bankston, Nov 9, 10.
Chickasaw....Okolona, Oct 23, 26.
De Soto....Hernando, Oct 2, 6.
Grenada....Grenada, Oct 30, Nov 2.
Lowndes....Columbus, Oct 9, 12.
Marshall....Holly Springs, Oct 2, 5.
Monroe....Aberdeen, Oct 16, 19.
Oktibbehah....Starkville, Oct 23, 25.
Pontotoc....Pontotoc, Oct 30, Nov 4.
Scott....Hillsboro, Nov 7, 8.
Warren....Vicksburg, Oct 18.
Jefferson....Rodney, Nov 6, 9.
Leake....no Exhibition this year.
Franklin....Meadville, Oct 11, 13.
Claiborne....Port Gibson, Nov 13, 16.
Panola....Panola, Nov 6, 8.
Pike....Summit, Nov 7, 9.

OHIO.

Athens....Athens, Sept 25, 27.
Adams....West Union, Sept 25, 28.
Ashtabula....Ashtabula, Sept 26, 28.
Ashland....Ashland, Oct 10, 12.
Alliance....Alliance, Sept 20, 22.
Belleville ...Richland Co., Sept 24, 26.
Brown, (Independent)....Ripley, Sept 25, 28.
Brown....Georgetown, Sept 4, 7.
Butler....Hamilton, Oct 2, 5.
Belmont....St. Clairsville, Sept 25, 28.
Belmont....Belmont Co., Sept 18, 20.
Conneaut... Ashtabula Co., Sept 27, 28.
Carroll....Carrollton, Oct 2, 4.
Clermont....Olive Branch, Sept 18, 20.
Clermont....Bantam, Sept 11, 14.
Crawford....Bucyrus, Oct 3, 5.
Clarke....Springfield, Oct 2, 5.
Champaign....Urbana, Oct 9, 12.
Clinton....Wilmington, Sept 18, 20.
Columbiana....New-Lisbon, Sept 26, 28.
Cuyahoga....Cleveland, Oct 2, 5.
Coshocton....Coshocton, Oct 10, 11.
Darke....Greenville, Oct 2, 5.
Defiance....Defiance, Sept 19, 21.
Delaware....Delaware, Sept 19, 21.
Franklin....Madison, Sept 18, 20.
Fairfield....Lancaster, Oct 10, 12.
Fayette....Washington, Sept 5, 7.
Farmers' and Mechanics' Association....Ashtabula, Sept 26, 28.
Greene....Xenia, Sept 18, 21.
Geauga....Burton, Sept 25, 27.
Geauga (free)....Claridon, Oct. 3, 5.
Gallia....Gallipolis, Sept 11, 12.
Guernsey....Cambridge, Oct 27, 28.
Hocking....Logan, Oct 3, 5.
Harrison....Cadiz, Oct 3, 5.
Huron....Norwalk, Oct 3, 5.
Highland ...Hillsboro, Oct 2, 5.
Horse-Breeders' Assn....Cleveland, Sept 5, 7
Hancock....Findley, Sept 27, 29.
Jackson....Jackson, Sept 26, 28.
Knox....Mt. Vernon, Sept 26, 28.
Lake....Painesville, Oct 3, 5.
Logan....Bellefontaine, Oct 4, 7.
Lawrence....Ironton, Oct 3, 5.
Loraine....Elyria, Oct 3, 5.
Licking....Newark, Oct 3, 5.
Lucas....Toledo, Oct 3, 5.
Mahoning....Canfield, Oct 2, 4.
Medina....Medina, Sept 18, 20.
Montgomery....Dayton, Sept 25, 28.
Morgan....McConnellsville, Oct 3, 5.
Miami....Piqua, Sept 18, 21.
Miami....Troy, Sept 21, 24.
Morrow....Mt. Gilead, Oct 10, 12.
Madison....Franklin Co., Sept 18, 20.
Marion....Marion, Oct 3, 5.
Madison....London, Sept 19, 21.
Muskingum....Zanesville, Sept 18, 22.
Marlboro....Stark Co., Sept 29.
Orwell....Ashtabula, Oct 1, 3.
Paulding....Junction, Oct 25, 26.
Preble....Eaton, Sept 18, 21.
Portage....Ravenna, Sept 5, 7.
Pickaway....Ciderville, 12, 14.
Putnam....Ottawa, Oct 3, 5.
Philadelphia....Philadelphia, Sept 25, 28.
Plymouth....Richland Co., Sept 25, 28.
Richfield....Summit Co., Sept 26, 28.
Richland....Mansfield, Oct 2, 5.
Ross....Chillicothe, Oct 3, 5.
Seneca....Tiffin, Sept 3, 5.
Summit....Akron, Sept 2, 4.
Scioto....Portsmouth, Sept 12, 14.
Sandusky....Fremont, Oct 2, 4.
Stark....Canton, Oct 4, 6.
Salem....Columbiana Co., Sept 12, 14.
Twinsburgh....Twinsburgh, Sept 12, 14.
Trumbull....Warren, Sept 11, 14.
Tuscarawas....New Philadelphia, Sept 26, 28.
Union....Marysville, Sept 26, 28.
Union, Greene Co....Jamestown, Aug 29.
Union Society....Cuyahoga Falls, Sept 5, 7.
Vinton....McArthur, Sept 19, 20.
Warren....Lebanon, Sept 12, 14.
Washington....Marietta, Oct 3, 5.
Wayne....Wooster, Oct 3, 5.
Wood....Perrysburgh, Oct 2, 3.
Wyandot....Upper Sandusky, Oct 10, 12.

Williams....Bryan, Oct 3, 5.
Wellington....Lorain Co., Oct 10, 12.

MICHIGAN.

Battle Creek, Town, Sept 26, 28.
Berrien....Niles, Sept 26, 28.
Cass....Cassopolis, Sept 5, 7.
Horse Show....Kalamazoo, Sept 11, 14.
Do. ....Hudson, Sept 19, 21.
Ingham....Mason, Sept 26, 27.
Kalamazoo....Kalamazoo, Sept 25, 27.
Livingston....Howell, Sept 26, 27.
Lenawee....Adrian, Sept 25, 27.
Lapeer....Lapeer, Sept 25, 27.
Macomb....Utica, Sept 26, 28.
Oakland ...Pontiac, Oct 10, 12.
St. Joseph....Centreville, Sept 26, 28.
Sanilac....Lexington, Sept 27, 28.
Shiawassee....Corunna, Sept 20, 21.
Van Buren....Paw Paw, Sept 27, 29.
Washtenaw....Ann Arbor, Oct 10, 12.
Wastenaw and Wayne Union....Ypsilanti, Oct 10, 12.

INDIANA.

Allen....Fort Wayne, Sept 19, 21.
Clark....Charlestown, Sept 12, 14.
Decatur....Greensburg, Sept 18, 23.
Dearborn....Lawrenceburg, Sept 10, 11.
Elkhart Co., Union....Goshen,
Fayette....Connersville, Sept 4, 7.
Fulton....Rochester, Oct 12, 13.
Fountain..Attica Oct 10, 12.
Gibson....Princeton, Oct 9, 12.
Jasper....Rensselaer, Sept 26, 28.
Kosciusko....Warsaw, Oct 3, 5.
Laporte....Laporte, Sept 19, 20.
Lawrence....Bedford, Sept 4.
Miami....Peru, Sept 26, 28.
Monroe....Bloomington, Sept 4, 6.
Morgan....Centerton, Sept 25, 28.
Montgomery....Crawfordsville, Sept 18, 21.
Noble....Albion, Oct. 3, 4.
Orange....Livonia, Oct 8, 13.
Putnam....Greencastle, Sept 10, 14.
Park....Montezuma, Oct 3, 5.
Posey....New Harmony, Oct 2, 5.
Ripley....Versailles, Sept 18, 20.
Rush....Rushville, Sept 11, 14.
Sullivan....Carlisle, Sept 26, 28.
Shelby....Shelbyville, Sept 11, 14.
Spencer....Rockport, Oct 10, 11.
Steuben....Angola, Oct 4, 5.
Union....Knightstown, August 28, 31.
Union....Russelville, Sept 3, 8.
Vermillion....Montezuma, Oct 2, 5.
Wells....Bluffton, Oct 2, 3.
Warrick....Boonville, Oct 2, 6.
Whitley....Columbia City, Oct 3, 5.
Washington....Salem, Sept 11, 14.
Union....Goshen, Sept 25, 28.
Union....Bridgeton, Sept 18, 21.

ILLINOIS.

Adams....Quincy, Oct 2, 6.
Carroll....Mt. Carroll, Sept 17, 19.
Champlain....Urbana, Sept
Cass....Virginia, Sept 4, 7.
Dupage....Wheaton, Sept 26, 28.
Hancock....Carthage, Sept 19, 21.
Henry....Cambridge, Oct. 3, 5.
Jo Daviess....Galena, Sept. 11, 14.
Knox....Knoxville, Sept 25, 28.
Kane....Geneva.
Lee..Dixon, Oct 1, 5.
Lake....Liberty, Oct 2, 3.
La Salle....Ottawa, Sept. 25, 28.
Livingston....Pontiac, Sept 18, 20.
Monroe....Waterloo, Oct 16, 18.
Macoupin....Carlinville, Oct 2, 5.
Macon....Decatur, Oct 1, 5.
Ogle....Oregon, Sept 25, 28.
Pike....Pittsfield, Oct 2, 4.
Rock Island....Rock Island, Sept 19, 21.
Scott....Winchester, Oct 2, 4.
Taxewell....Tremont, Sept 26, 28.
Woodford....Metamora, Sept 19, 21.

WISCONSIN.

Ag. & Mech. Ass'n, Milwaukee,
Dodge....Juneau,
Iowa....Dodgeville,
Racine ...Union Grove, Sept 11, 13.
Winnebago....Oshkosh, Sept 19, 20.
Waupaca....Wayauwega Village, Sept 13, 14.

IOWA.

Appanoose....Centerville, Oct 5, 6.
Bremer....Waverly, Sept 26, 27.
Delaware....Delhi, Sept 25, 27.
Jackson....Andrew, 19, 20.
Marshall....Marietta, Sept 19, 21.
Poweshiek....Montezuma, Sept 22, 23.
Warren....Indianola, Sept 20, 21.

MINNESOTA.

Winona....Winona, Sept 19, 21.

KANSAS.

Breckenridge....Emporia.

CALIFORNIA.

San Joaquin....Stockton, Aug 28.

UPPER CANADA.

North Wellington....Fergus, Oct 9.

LOWER CANADA.

Brome....Knowlton, Sept 18.
Compton....Eaton Corner, Sept 27.
Huntingdon....Huntingdon, Sept 25.
Laprairie....St. Constant, Sept 20.
Levis....Notre Dame de la Victoire, Oct 2.
Maskinonge....River du Loup, Oct 2.
Montcalm....St. Ligouri, Oct 3.
Montreal....Montreal, Aug 24, 25.
Ottawa..Aylmer, Sept 27.
Pontiac....Clarendon Center, Oct. 4.
Rimouski....St. Germain, Aug 28.
St. Johns....St. Johns, Sept 27.
Shefford....Waterloo, Sept 19.
Stanstead....Magog, Sept 15.

Wheat, Oats, &c., in New-Hampshire.

While I was at New-Haven last February, Mr. Wells of that place, presented me with about an ounce of Alfalfa or Lucern seed, and sometime subsequent Mr. Goodale, Secretary of the State Ag. Society of Maine, forwarded to me about the same quantity of Alsike or Sweedish clover seed. These seeds were sown on the 20th of last April, on one corner of a field, with the English Potato Oat. After the oats were harrowed in, the Lucern and Alsike clover were sown. The balance of the field, just half an acre, was sown with timothy, and northern clover seed in the hull; then the ground well rolled. The result of the whole matter is, I have got a splendid piece of oats, the tallest of which are plump seven feet high; also a capital catch of timothy and clover. Some of the Alsike clover is headed out, being 2½ feet high, and the same with the Lucern, although shaded by these tall oats. Up to yesterday (Aug. 13th), with the exception of two or three square rods, the oats over the whole piece stood as straight as cane poles; but a heavy shower last evening, accompanied with a strong south wind, has prostrated that portion of the field where the oats were the heaviest, say six feet and over in height; but as they are about fit to harvest, they will not be greatly injured, if I can secure them within a reasonable time.

I have just received the "Rural New Yorker" of Aug. 11, in which the editor says "the oat crop is very heavy here abouts," and adds, "among the samples presented us of late, some heads of the Black Main variety, grown on the farm of Judge Wm. Buell of Gates, near this city, which are decidedly extra in both size and weight. Several of the heads measure from eleven to twelve inches in length." Inclosed I forward a head of oats grown on my farm, measuring *seventeen* inches! A trifle *a-head* of Judge Buell's "decidedly extra" oats.

In the same Rural, Mr. L. A. Beebe of Lima, tells of his sowing some of the Dayton wheat, side by side, in the same field with the Mediterranean, and thinks it will yield from the same straw one-third more. A head of the Dayton was found to contain *thirty* kernels, while the Mediterranean has only twenty.

Messrs. Editors, is thirty kernals of wheat in a head considered *extra* in western New-York? I have just rubbed out sixty-five kernels of wheat from a head of Gen. Harmon's "improved white Flint wheat," and I have a dozen other varieties that will shell out over thirty kernels to the head.

With this I forward two heads each of the Early Noe, improved white Flint, early Japan, Michigan Tuscany, and white Blue stem. Will you oblige by rubbing out and counting the grains of each variety, and give the result in connection with this? You will see the midge has injured the crop somewhat. Last week I carried a *grist* of the white Flint to the mill; no toll was taken, and the yield of flour was 50 lbs., and of as good a quality as Haxall's best brands. The wheat weighed 66 lbs. per bushel, and I am very happy in saying that there are scores of farmers in this town that have grown fine crops of winter wheat the present season, and the spring sown is super-extra.
Levi Bartlett.

Warner, N. H., Aug. 14, 1860.

We have complied with our correspondent's request, and find that the heads of Michigan Tuscany contain 70 and 63 kernels—the Early Japan, 53 and 56—Gen. Harmon's White Flint, 53 and 55—White Blue Stem, 38 and 42—and the Early Noe, 25 and 28 kernels each. Pretty good for New-Hampshire! The Tuscany, White Flint, and Blue Stem are very fine samples of wheat.

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DRAINING HILL-SIDES.

"There is much upland," says the Boston Cultivator, "that only requires to have the water taken away from it, to become at once and permanently productive in the most valuable crops. Such are frequently the sides of large hills, where the water soaks slowly through the soil near the surface. These water-soaked spots may be known by the tendency to produce rushes, and such bushes as grow in swamps. From their position in regard to retaining the wash of other parts of the field, these spots are often comparatively rich, comprising a proper mixture of the mineral and vegetable elements."

Such situations cannot be drained by open drains; they allow a large portion of the water to run in from the surface, which thus washes in the finer and richer portions of the soil. Underdrains laid with tile or stone should be provided, and carefully covered, so that no water can enter them except by filtration, and then the soil will retain the principal fertilizing matters, and prove very productive in almost any crop.

[For the Country Gentleman and Cultivator.]

WHEAT GROWING AND THE MIDGE.

Messrs. Editors—We have another good crop of wheat in Western New-York, and to all farmers of an observing and investigating turn of mind, it is a good subject of inquiry why we raise so much better wheat now than we did from three to six or seven years ago. And what is the reason the midge has not destroyed it for two or three seasons back, as they did during the years before referred to? The usual answer to this question is, that farmers sow early kinds of wheat on good wheat land, and put it in well, and in good season. This is all true as far as it goes, but in my opinion it does not cover the whole ground. That is, though it may give some of the principal reasons why wheat does well, it by no means gives all of them.

One of the principal reasons why the midge has destroyed but little wheat during the last two years, may be found in the fact that we have had early seasons. That not only wheat, but as a general thing, all other crops have been much earlier than they had for some years before; so that wheat by heading out some two weeks or more earlier than it had for some years before, got the start of the midge, and, where other things were favorable, made a fine crop.

The influence of different seasons in favoring or preventing the operations of the midge, may perhaps be better understood by referring to the manner in which they first made their appearance and commenced the destruction of wheat in this vicinity. They were first found in a few late heads near the fences, but not early enough, nor enough of them to do much damage. The next year they were a little earlier and more of them, and so continuing to make their appearance earlier and to destroy more and more each year, until there was but very little wheat that escaped their ravages, and the prevailing opinion in this section seemed to be, that we would have to stop raising wheat. But what now seems to be generally forgotten, is the fact that while the midge was the most destructive, we had very late seasons; that wheat was not ready to harvest until nearly or quite the first of August, and that we were able to raise but very little wheat until the seasons changed, and wheat headed out some two weeks or more earlier than it had for several years before. Nor does the fact seem to be very generally considered and understood, that the change two years ago was not a gradual one. Instead of a moderate change of a few days each year, which the midge would be likely to keep pace with, the season in 1858 was some two weeks or more earlier than it had been for some years before; and that this, together with the fact that last season was a little earlier than the year before, and that this has been a few days earlier than the last, accounts for the continued good crops of wheat that have been grown, notwithstanding the midge have made their appearance a few days earlier each year.

This brings us to the consideration of a fact, that seems to be almost entirely ignored or forgotten by the farmers of Western New-York, which is, that we cannot always expect early seasons. That sooner or later, and in all probability before many years, they will take a turn; that the change may be a sudden one like that two years ago, with this exception, that the season may be some two weeks or more later instead of earlier. And that when we consider this in connection with the fact that the midge continues to make their appearance several days earlier each year, than they did the preceding one, there would certainly seem to be sufficient reason for farmers to hesitate and be cautious in going into the cultivation of wheat very extensively. And to fear that sooner or later, perhaps another year, a very late spring may cause wheat to be very late in heading out, which would be very likely to result in its entire destruction. But if—when we have another turn in the seasons—the change is a gradual one, the result will be much the same, with this exception, that it will be a little more gradual for a year or two. But with the midge coming a little earlier each year, and the season gradually getting later, it cannot be many years before wheat will be mostly destroyed. So that in any case we cannot reasonably expect to be free from their ravages many years. Hence, it will be well for wheat growers in midge infested sections, to remember that no one can tell how soon a change in the seasons may expose their wheat to destruction.

Another thing worth noticing in relation to raising wheat is, the general, in fact almost uniformly heavy crops that have been grown for the last few years. This is more especially worthy of remark the present season, as the latter part of the winter and first half of the spring, were in consequence of a very unusual and long continued term of freezing and thawing weather, very unfavorable for the crop. This heavy growth of wheat may be accounted for, by the fact that the land had not been in wheat in five or six, and perhaps in many instances, seven or eight years, and as a general thing had been seeded down the most of that time, thus giving it a good long time to rest and recover from previous exhaustion. To which perhaps, it may be well to add, that in consequence of the cessation of wheat raising, more land has been seeded to grass, more stock kept, and more manure made and applied than ever before.

Now all of this, in my opinion, goes to show that it is better policy for the farmer not to sow wheat very extensively, but by giving his land a good chance, and cultivating and manuring well what he does sow, raise heavy crops. Another advantage in this course is, that good, heavy wheat is almost always earlier, and less liable to be injured by the midge, than a poor crop. And should we sooner or later, as most likely we shall, have late adverse seasons in which the midge is very destructive, there will be a great deal less loss in labor, seed, and the use of the land, than there would be were farmers to return to their old practice of making wheat their main dependence.

Western New-York, 1860. P. F.

[For the Country Gentleman and Cultivator.]

ABOUT WHEAT.

Eds. Co. Gent.—Farming on a small scale, I have only the experience of a small farmer to give; but, as this experience can be applied to more extensive operations, it may not be out of place to give it publicity. My present communication will have reference to a crop of wheat of the last year's growth. It consisted of about one and a half acres on a gravelly soil. The ground was fitted by raising a crop of peas, which was harvested in August, after which the land was plowed about ten inches deep, and then covered with well rotted manure; a part from an old chip yard, and the remainder from a heap of barnyard manure which had been moved and shoveled over sufficiently to secure its rotting.

The manure on the land was thoroughly dragged so as to be mixed with the soil, and the wheat sowed about the 5th of September. The crop has just been harvested and housed; and the result, so far as known, is thirteen hundred and fifty bundles of plump, clean wheat of the Mediterranean kind.

I do not think it as well filled as in some instances, owing perhaps to its lodging early. By the bye, is not the Mediterranean too much given to lodge, when sown on highly cultivated land? I infer this may be so from a remark of J. Johnston, in a communication in your paper of the 26th inst. In speaking of the Missouri May wheat and of Soules, both of which were heavy crops on the part of his farm sold last year, he says: "If Meditorranean had been sown on the same field, the wheat would have been down flat, while now, none of it is down."

This remark, in connection with my experience with the Mediterranean the last year, would lead me to prefer some other kind to this, if I were to sow on highly enriched soils. I will only add, that I am in favor of surface manuring for wheat if we desire the greatest benefit to the incoming crop. I have no doubt that in the case given above, it more than doubled the amount raised from the given field. S. W. R. *Clinton, July* 30, 1860.

Inquiries and Answers.

New Rochelle Blackberry.—"What is the latest experience with this berry, and in other places than where first raised? B. B." [The only complaint we have heard is sourness or a want of good flavor, in some localities or seasons Although not equal to some varieties, we have nevertheless found the fruit very agreeable, and possessing an important advantage in being less seedy than any other sort. When properly cultivated, pinched back and pruned, it is enormously productive. We have just examined a few bushes, with a view to answering this inquiry, and selecting a single cane, three feet and a half high, counted 327 berries on it. Others appeared to be as productive. The size of well grown berries is about an inch long, and three-fourths in diameter. These bushes are now growing their third summer since planting.]

Hay-Spreading Machine.—"Can you inform me the value of Stoddard's Hay Spreader?" We have no knowledge of this machine, other than from the examination of the cut which has appeared in some of the agricultural papers. It does not appear to be essentially different from the hay-spreader which has been long used in England, and which we figured and described many years ago in the Cultivator, from an imported one which had been tested in Western New-York. In the moist climate of England it is of more value than here. It is a heavy, costly, complex machine, and the imported ones were soon thrown aside. They would be now of still less value since mowing machines are so generally used, and which leave the grass evenly distributed over the surface.

Cherries.—I have a fine lot of dwarf cherries. Will they bear higher culture than cherries on Mazzard stocks? Has the Gov. Wood cherry proved to be a superior variety? B. *Humboldt Co., Cal.* [Cherry trees will grow about as vigorously on Mahaleb stocks as on the common or Mazzard root, and should be properly cultivated, but not much enriched. In the west, where the *heart* varieties fail, the Mahaleb will only partially prevent the evil, or in but a slight degree—but the Morello and Duke cherries, worked on the Mahaleb, succeed finely, and may be very freely cultivated. The Gov. Wood proves to be one of the very best sorts grown.

Ice House.—What is the best method of constructing an ice house in the open air? We have a building in the house cellar, made for that purpose, and we have but *one* objection to it, which is this: If it is ever so well packed, in the best season, and with the best of ice, the ice is sure to lose its *visibility* before the close of dog days, the time it is most desired. Will the editors, or some of the readers of the Co. Gent. or Cultivator, propose a remedy? I. W. Sanborn. *Lyndon, Vt.* [We cannot inform our correspondent the reason of the disappearance of his ice, without knowing the size of the vault, mode of packing, thickness of sawdust, facilities for ventilation, and manner of drainage. The latter is very important, and must be so that the water shall immediately pass off as the ice melts, and must at the same time prevent the cold air, which settles downward, from passing off also, else the warm air will flow in from above, and the current thus produced will melt the ice rapidly. The size of the vault must be large enough to hold a good supply, and to keep a cold mass large enough to prevent access of warmth to the inner portions. Six or seven feet square is as small as will answer. The sawdust should surround the ice a foot in thickness, either in the exterior and permanent walls of the ice house, or within the walls, or both. The ice must be sawed in blocks of uniform size, so as to be packed in a solid mass. Ventilation of the upper part of the house is essential, to prevent heating. Sawdust may be applied so thick or copiously as to *heat* and do injury. An unmatched board bottom, with the small cracks between the boards to allow the escape of water, and then six or eight inches of sawdust, we have found to make good drainage. The sawdust must be packed even and solid—ice is often rapidly lost by the sawdust being too loose, and admitting currents of warm air as the cold air flows out below. An ice house above ground is best, is more accessible in every respect, and may be far more easily filled. It is usual to make simply double board walls, with a space of ten inches or a foot, filled with well rammed tan or sawdust; in which case a few inches of sawdust inside the walls, and surrounding the ice, will be sufficient. But we have seen ice kept in the best manner packed in nothing but a board shanty, without double walls, care being taken to pack a wall of sawdust a foot thick on every side. For a family of about eight persons we have an abundant supply of ice furnished by means of a house eight feet by ten outside, (eight feet high,) and six by eight feet inside. It has two double doors, one for entering above when the vault is nearly full, and the other lower down, for passing in when it is nearly empty. Three or four loads of ice will fill it.]

Grain Binders.—Mr. Hawk of Richland Co., O., inquires of the operation of the binders attached to reaping machines. "Sherwood's Grain Binder" enables one man to take care of the grain as fast as cut by the reaper, (say ten acres per day,) in good order. It is bound by a fine wire on the platform, with very little scattering, giving the attendant plenty of time for the operation, and saving at least the labor of three hands otherwise required. N. *Monroe Co., N. Y.*

Joint Worm in Rye—The Barley Fly.—We learn from various sources that the rye crop of the New-England States is suffering very materially the present season from the joint worm, which causes it to crinkle down and fill very imperfectly, or not at all. The stalks effected have enlarged joints or bunches near them, in which a maggot is found, which, the next season, hatches into a fly, which is the insect originating the mischief. A similar fly has been very prevalent in barley in this State, discouraging its culture, but we believe that in some instances this season, where this grain has heretofore suffered much from this insect, very early sown barley has almost entirely escaped, while the late sown is almost ruined We should be glad to learn whether this is generally the case.
Niagara Co., N. Y. B.

Stable Floors, &c.—I wish to inquire what will make the best floor for stables in a basement story. There is plenty of timber at hand, stone and gravel. I intend to make stantials, as it is recommended by many. Will some one give me the description and the method of fastening all at a time? Perhaps Mr. Bartlett can give the Shaker plan. The rest of my stables are stalls with chains, which I thought the best plan, but I want to keep up with the times. H. P. Norton.

Langstroth's Bee-Hive.—Can you, or any of your correspondents, inform me through the columns of your paper, what the right of using Langstroth's patent movable frame hive costs? Also the cost of constructing them compared with those described in the Register of Rural Affairs of 1858. Apis.

Smut in Wheat—Brining and Liming.—I have often seen the statement that to soak seed wheat in brine, and then coat it with fresh slaked lime, would prevent the appearance of smut in the future crop, but in my case, the present year, it proves no preventive. Last year I saw very little, if any, smut in my spring wheat; this year, though the seed was brined and limed, it is quite abundant. Perhaps it may have prevailed in the China Tea variety, procured of a neighbor, which I mixed with my own Black Sea, and brined mainly with a view to float out the oats, barley, and light grains of wheat found therein. What causes smut, and is there any other remedy save to sow seed perfectly free from it? Tyro

The Birds.—Could you or any of your readers tell through the Cultivator what will prevent the birds from picking strawberries, currants and raspberries; any information would be gratefully received by many. A. G.

Bread.—You have published a number of recipes for making bread, but none that I have seen for making it from unbolted wheat flour. Will not some one tell us something about it? W. *Circleville, O.*

Good Pump.—I notice a correspondent in the Co. Gent. of the 19th inst., makes inquiry for a good well or cistern pump. I would refer him to Young's Rotary Pump, being, in my opinion, the best in use. It does not lift with an endless chain, as I suppose to be the case with the one in use by your correspondent. I am not mechanic enough to describe it, but I feel assured that it would be free from the great objection to force and suction pumps, also the endless chain pump; it is not liable to get out of order, in fact it looks as if it would work for an age without repair. It is immersed entirely under the water, and is its own lubricator—has no valves or stuffing boxes, no chambers to be kept air-tight, and as it is under water is not liable to injury by frost, and wastes sufficient water to empty the pipe before the water would freeze in it. I think it is the invention of Wm. A. Young of Charlotte, N. C. B. C. *Chattanooga, Tenn.*

Iron Weed.—Would say to "P. D.," the mode of killing iron weed on pasture grounds that I have practiced or known, is to cut them down repeatedly, and not allow them to seed or even blossom. If persevered in, I think this method will ultimately eradicate them. If there is another more efficient and expeditious way of killing them, other than with the plow, I would like to become acquainted with it. J. M.
Deerfield, Va.

Refining Wine.—How much isinglass is required to refine one gallon of wine? When should it be put in? I. [Will some of our-wine making readers please give us the desired information.]

A Barn-Yard Pump.—I have a well in my barn-yard forty feet deep, and would very much like to hear of a good practical pump for it. Something not liable to get out of order, anti-freezing, and constructed perhaps upon the lift and force principle. Have you, within the commonwealth of New-York, such a pump for a farmer? My well is required to serve 50 to 60 head of cattle and horses, and has ample water for that purpose. I have been using the endless chain pumps, after taking out the common stock pumps twice, and throwing them aside, as not answering, from the buckets and their leathers wearing out so rapidly. My farm hands think there must be, *or ought to be*, some pump invented for this purpose, that would save their arms from the almost endless crank-turning which the endless chain pump demands of them.—*Brandywine, Delaware.* [Cowing & Co. of Seneca Falls, N. Y., make an excellent forcing pump, which has been found valuable for deep wells, where large quantities of water are required—and they can doubtless give all the information required. We have seen also a strong recommendation of a forcing pump manufactured by J. M. Edney, 147 Chambers street, N. Y., but we do not know personally its quality. For smaller quantities, Winegar's elevator, figured and described on p. 272 of the Country Gentleman, vol. ix, answers a good purpose.]

Manuring Trees and Vegetables.—Shall I apply to my young fruit trees this fall, clear manure or a compost? If the latter, what should be its composition? I apply the kitchen and chamber slops and the washing suds to my young trees. Is it right? How shall I prepare the contents of a privy to render it suitable for fertilising my garden? Is there any truth in the assertion that vegetables raised on ground fertilized with human excrements, are unhealthy? J. I. F. *Middletown, N. Y.* [Unfermented manure does well when applied in the fall as a top-dressing to trees. The rains and melting snows dissolve a portion and carry fertility down among the roots. In the spring the remainder may be spaded in, if the soil is light, or left near or at the surface, if it is heavy. When manure is applied more nearly in contact with the roots, it should be old or decayed, or in the form of compost. The best compost, for general purposes, and for common soils, is a well rotted mixture of yard or stable manure and muck or turf, with a small portion (say a twentieth) of ashes. The slops mentioned are good for trees—but care must be taken to apply them properly, that is, not at the foot of the trunk, where the tree does not want them, but over the surface as far as the small roots extend, which is usually about as far from the trunk, *each way*, as the height of the tree. Frequent or daily applications of coal ashes to vaults, will destroy all the bad odor, and form the whole into a good compost, that may be easily and comfortably shovelled out. In the absence of coal ashes, thoroughly dried muck, or pulverized charcoal, if in sufficient quantity, will answer a good purpose. There must be enough of either material to render the contents dry and pulverable. There is no truth in the assertion that night-soil grows unhealthy vegetables. The complete decay and decomposition of the manure takes place, and totally new compounds are formed, so that, through a wonderful provision of Creative Wisdom, decayed and fœtid matter is converted into the most beautiful and delicate structures of vegetable tissue—into pure vegetables, delicious fruits, and into blushing and fragrant flowers.]

Pears on Quince—Peaches on Plums.—1. Can the pear be successfully propagated by root-grafting on the Angers quince roots, instead of budding? [Experiments have generally been unsuccessful.]—2. Is not the peach, when worked on plum stocks, more hardy, and does it not blossom later in spring than upon its own roots? On our lowest grounds, such as "creek bottoms," the peach crop is more liable to be destroyed by spring frosts than on high land; hence we wish to learn if we cannot succeed better with peaches on low ground by working on plum stocks. [The peach is a little more dwarfed and rendered slightly hardier on plum stocks—similar to the effects of a hard soil and moderate cultivation—but the difference is slight. It is much more important to select elevated sites, out of the reach of valley frosts.]—3. At what height should the plum stock be "budded" or grafted? A. Babcock. *Union Co., Ill.* [Near, or within a few inches of the ground.]

A New Weed.—Enclosed I send you a weed that I should like to know the name of. It is a very bad weed, and it is spreading fast in this vicinity, and where it grows it runs out the grass, and where the land is plowed the more rank it grows. Now if you can give me any information in regard to this weed, and the best mode of destroying it, through your paper, it will be thankfully received. Wm. Blakely. *Bloomville.* [The plant forwarded appears to be a species of *Vernonia*, which we are not acquainted with, and we cannot therefore give the best mode of extirpation.]

New Rochelle Blackberry.—Can you inform me the time to plant Lawton Blackberry seed, and how much seed to the acre, and the price per pound for the seed? M. B. Oviatt. *Euclid, O.* [We are not aware that the seed is offered in market. It should be mixed with slightly moist sand soon after washing out—and should be sown late in autumn in rich garden mould, buried half an inch to an inch deep, according to the porosity or heaviness of the soil. After one or two years growth, plants may be set out in rows six or eight feet apart, and four or five feet in the row, and kept constantly cultivated, and properly pinched in in summer. As new varieties will thus be produced, most of them will probably be inferior to the genuine Rochelle, miscalled the Lawton. The genuine plants are obtained only from the root.]

Disease in Catawba Grapes.—You will find inclosed some diseased Catawba grapes. I lost them last year by the same disease. The cause, and a remedy, would be thankfully received through the columns of The Cultivator. Charles Mason. *Sterling Hill, Ct.* [The disease is probably the *rot*, so destructive to the Catawba grape at the west. We do not know a remedy, although a well drained subsoil is generally regarded as most likely to be free from it.]

Peavine Clover.—I see a notice of the peavine clover. Can I get some in the city of New-York? If so, of whom? B. C. [It can probably be procured of J. M. Thorburn & Co. of New-York.]

Barren Raspberry Plants.—I wish to ask in reference to my white raspberry. A year ago last fall I set out quite a quantity, and was very particular in taking them up. They scarcely wilted, but grew right on, blossomed last summer, but no berry; this season they were and are very fine and rank, bloomed finely, but not a berry, but instead a kind of cup—rather a depression than swelling berry. They were taken from a neglected patch said to be of a good kind, but as I since learned had never borne. Please tell me if the male and female blossom are on the same stalk? I fear they are all males. Or can you tell if anything can be done with them except cutting them down. J. S. Wood. *Lansing, Mich.* [The raspberry usually has perfect flowers—some varieties have badly developed ones in unfavorable localities—this may be the case with the plants set out by our correspondent. With some partially fruiting sorts, summer pruning will assist productiveness that is, pinching off the ends of the new shoots or canes when three or four feet high. The result will be visible another year. We would recommend him to procure Brinckle's Orange, and perhaps Fastolff, Knevett's Giant, and Franconia. The first is very prolific—the others usually nearly as much so. They should be laid down and slightly covered in winter with an inch of earth—a precaution that will often give good crops when otherwise there would be few or none.]

Osage Orange from Layers.—Can you inform me through The Cultivator if the Osage Orange will root by laying—also the best means for causing plants to root that are backward to do so, as it is of great importance where plants have missed and others cannot be got to grow for the shade of the old ones—also the best size and shape of bee-hives, with the best information on their management. A Subscriber. *Apanoose, Ill.* [The Osage Orange may be raised from layers, by bending down the young and fresh growing shoots; covering in little trenches made for the purpose with a few inches of earth, and then bringing the end of each shoot in an upright position. It is much cheaper and easier to raise from seed. It is hard to fill gapes in hedges—the young plants are overshadowed. Pains should be taken in starting a hedge, to set out none but good evenly selected plants. In order to get the desired information on bees fully, procure Quinby's book, which is sent by mail for one dollar.

Potato Bug.—Will you inquire through the columns of The Cultivator, what will destroy the bug known as the potato bug? I planted four acres in potatoes early in February, and about the time they began to bloom, thousands of these striped bugs, that go in schools, took possession of the lot and stripped them of every particle of verdure. I have used lime and ashes, but nothing that I have been able to discover will stop their ravages. E. Dashiell. *Tenn.*

Pits.—Nearly a year ago some one in your columns, promised to give us some directions for the construction of pits for the reception of tender plants in winter. Isn't it about time he was doing it? W. *Ohio.*

HORTICULTURAL SUGGESTIONS.

Cultivators, who gave close attention to their trees, grounds, and gardens, early in the season, frequently forget many important operations of a minor character at this season of the year. An occasional reminder may therefore be useful.

Manure is the mainspring of successful growth; make ample provision therefore for a full supply, thoroughly prepared by composting. A famous horticultural establishment, where nothing scarcely ever fails to grow and flourish, keeps one man constantly employed, with necessary assistants, year in and year out, in manufacturing and mixing fine composts of various kinds.

Record the names of young or newly set fruit trees in orchards and gardens. Label them distinctly, and register them in a book kept on purpose. Planters are often careless until the trees bear, and then they would gladly know the names, but cannot find them.

Weeds are apt to be overlooked at this time, and allowed to ripen seeds enough for another whole season of labor in extirpating them. Remember, it is easier to dig and destroy one weed now, than a thousand next year. Cabbages, root crops, nursery rows, &c., should therefore be kept thoroughly cleaned.

Blackberries and *Raspberries* should have the old canes cut out, that have done bearing, allowing the new canes for next year's crop a better opportunity for maturing and hardening.

Grapes, to keep well, should be well ripened. The main stalk of the bunch, of the Isabella, for example, should have changed to purple, as an indication of full maturity. This full maturity, in the Northern States, can be only attained by rich and good culture and proper pruning. The thick brush of neglected vines bear smaller grapes, with half-ripened, acid flavor, and green stalks—these will freeze more easily than fully ripened specimens, and wilt if too dry, or decay if too wet, much sooner than those handsomely matured.

Tomatoes keep in bottles or cans more perfectly than any other fruit, and with simple preparation, or brief cooking. Lay in a good supply early, while the fruit is high-flavored with summer suns.

Sow *Lettuce* and *Spinach* for early spring use. A snowbank makes an excellent covering for them during winter, and they may therefore be sown where snow is expected to accumulate, with the previous addition of brush and coarse litter, and evergreen boughs. Lettuce may be had very early in the spring by transplanting these wintered plants into the hotbed as soon as made. They will be fit to use in a few days, two or three weeks before hotbed plants sown from seed.

Seeds, of vegetables and flowers, should be gathered as they ripen, wrapped in papers, carefully marked; adding the year, and placed in a dry drawer or on a shelf. Such seeds as do not readily shell out should be placed on spread newspapers, in a garret or on a broad shelf, and allowed to remain there for a few days, or longer, as required.

Strawberries, not already set out, should be left till next spring, as they cannot grow much after the present time, and will be in danger of being thrown out or destroyed by the frost of winter.

Pears should be picked a week before they would fully ripen on the tree, and placed in drawers or dark boxes to mature. They will thus color finer, ripen more deliciously, and those liable to rot at the core, be far less liable to this disaster. There are very few pears that are not made better by such treatment. The Bartlett, by keeping it in a dark drawer for a week, will often present a brilliant carmine cheek, when otherwise a faint brownish shade only would be seen. The Bartlett will ripen well in this way, even if picked before fully grown; the English Jargonelle, always rotten at the core if matured on the tree, becomes a good pear by house ripening.

On the other hand, a peach is never good unless fully matured on the tree.

Peach trees and late growing kinds may be *budded* as long as the bark will peel freely. The ligatures of buds already inserted, should be removed before they cut into the bark by the increased growth of the stock.

Seeds of fruit trees, gathered for planting, must be preserved with some moisture, and not allowed to become very dry, or they will vegetate tardily. This is especially necessary with cherry stones, which must be mixed with moist sand or peat, within a few days after taken from the fruit; and other seeds, as of apple, plum, pear, &c., are better if kept moderately moist, till subjected to frost in winter. Novices often fail to raise chestnuts and horse-chestnuts, because they allow the exterior shell to become dry, or partly so.

Ground for the spring planting of fruit trees, should be prepared in ample season—by underdraining if necessary, deep plowing, subsoiling, applying manure or compost, &c., as the case may require.

TREE ROSES.

Messrs. Editors—Can you inform me what kind of a stock roses are budded upon to make Standard or Tree Roses? Give the whole "modus operandi" of doing it, &c. Also what kind of plants should be in a small flower-garden, three rods long by two rods wide, to have a fine display of flowers during the summer months? Is a Pœonia the same as what is called "Piney" in the country?

Georgetown, O. J. C. Harney.

The best stocks to bud for tree roses, are strong growing kinds which do not sucker. The hardier sorts of the Prairie rose, if first made to grow upright, do well for this purpose. A large number may be kept in an upright position by tying to a horizontal rod at proper hight. The Boursalts sucker too much. This is also the chief objection to the Manetti, an excellent stock in other respects. Tree Roses are difficult to manage, and require skill and much attention to preserve in a symmetrical form, and in a vigorous state of growth and blooming. We would not advise our correspondent to undertake them, except for trial in a small way. If the heads are not as large in diameter as their hight, and they are not kept in a free growing state by good culture and pruning, they appear meagre and unsatisfactory. It is usual to bud them three or four feet high, and sometimes more—two or more buds are usually set—and the shoots springing from them are cut back the second year, so as to form an evenly distributed head. Free growing varieties only should be chosen—if of summer blooming sorts, a fine display can be had but once in the season; the strongest growing among the hybrid perpetuals, as La Reine and Mrs. Elliott, will, with skillful pruning, make good trees, but they will only occasionally bloom, not profusely through the season.

The word "Piney" is a corruption of *Pæonia* or *peony*, and means the same thing.

The Best Legacy.—No man can leave a better legacy to the world than a well educated family.

Abstracts from our Exchanges.

Homes at the East.—The Homestead, in an article on "Homes at the West," well says that "homes in the east can be bought for less of labor and life, though for more money. *Here*, too, there are farms to be bought for less than the buildings and fences cost; but the reason is to be found in the lack of energy, knowledge, common sense of the old proprietors, who have in laziness or ignorance, or for some other reason, allowed the land to run down, the weeds to encroach, and the need of repairs and manure so to press upon them that they have not the energy properly to meet it. These farms are near the school and the church, and near the market; they can be reclaimed, and the old soil will respond quick to the quickening influences of energetic, sensible husbandry. *Not a farm exists in Connecticut, no matter how run down*, but it can be renewed and restored to as great fertility as it ever had, *from its own resources*. Here is a chance for you, young men—fortune seekers—there is more money to be made with a less outlay of labor and life than in the West."

Boiled Corn for Hogs and other Stock.—Wm. Van Loon, writing to the Prairie Farmer, says that he has practiced feeding boiled corn to his stock and hogs, and is "satisfied that he saves one-half his grain, and gains as much more in time;" that one bushel of corn on the cob, boiled, will produce as much pork as two fed raw, and in one-half the time. In one experiment he fed three bushels of boiled corn, per day, to 27 hogs, for ten days. The average gain was two pounds per day. He then fed the same lot of hogs on three bushels of raw corn per day for twenty days—they gained a mere trifle over one pound per day. These were small young hogs—larger ones would have fattened better.

Fire-Proof Wash for Shingles.—The following simple application will no doubt prove of great value. We quote from the Albany Knickerbocker: "A wash composed of lime, salt and fine sand, or wood ashes, put on in the ordinary way of whitewashing, renders the roof fifty fold more safe against taking fire from falling cinders or otherwise, in cases of fire in the vicinity. It pays the expense a hundred fold in its preserving influence against the effect of the weather. The older and more weather-beaten the shingles, the more benefit derived. Such shingles generally become more or less warped, rough and cracked; the application of the wash, by wetting the upper surface, restores them at once to their original or first form, thereby closing the space between the shingles, and the lime and sand, by filling up all the cracks and pores in the shingle itself, prevent it from warping for years, if not for ever."

Composts of Seaweed, Muck and Manure.—The following hint (which we find without credit) will be of interest to farmers on the coast, and worthy of the attention of all who can put it in practice: "Let the farmer take four parts of rockweed to two parts of barnyard manure, two parts of muck, have them thoroughly mixed by swine, then piled up to heat, and he can produce more from his farm, and at one-half the expense, than he can by using any of the high-sounding fertilizers. On five-eighths of an acre I cut three tons of hay the first crop. It was done by applying this compost. I would not plow in manure to raise grass, more than three inches; but dress it with a light top-dressing every year, and then have thus grown large crops of hay."

Effect of Age on Leather.—The Scientific American says "that calf-skin leather, instead of improving in quality with age (as generally supposed) when made into boots, deteriorates rapidly. It is subject to a species of dry rot, and in the course of three years becomes as tender as brown paper. It first appears at the edge near the soles, in the form of a black glossy sweat, resembling varnish, gradually proceeding over the whole." Grease, we are further informed, rather accelerates than arrests this decay; sole leather endures much longer under constant use than when laid away in a dry situation. Cow skin and kip leather are not thus affected, but the best as well as the poorest calf skins are subject to it.

The Catalpa for Fence Posts.—Several facts are given in the Valley Farmer, going to show that the wood of the Catalpa tree is equally as durable for fencing purposes as the red cedar. It grows rapidly, may be readily transplanted, and only needs to grow in situations protected from high winds, (which are very apt to split and break the branches,) to attain to a large size. It is a handsome shade tree, both in flower and foliage; it is little employed save for ornamental planting, out of its indigenous localities along the Ohio River and south of that latitude, though it may readily be grown elsewhere.

Pasturing Meadows.—An old farmer, writing to the Boston Cultivator, gives several facts from his experience going to show that newly seeded clover does best when pastured down in the fall, and that "old fog" meadows never produce as valuable hay as they would if fed down moderately in autumn. The grass ought to start close to the ground, and not from the stalks left by the scythe, as in that case the sprouts do not get sap enough to support them and give that quick growth that is required for good hay. He adds also that he "never knew good corn to grow on land that had been mowed several years and the hay carried off, and the old fog left on the land unfed."

Manuring Grass Lands with Straw.—A writer in the Prairie Farmer by spreading a quantity of straw over a timothy meadow in the spring, increased the product of hay one-third the same season, and it has been double for two seasons since over the remainder of the field. He says he had no trouble in raking the meadow with a horse-rake without disturbing the mulch, and that he has since used all his coarse litter in the same way, with good results.

Mixed Husbandry—Manure.—A correspondent of the Ohio Cultivator gives the following illustration of the advantages of raising animals on a farm, for the purpose of the manufacture of manure. He says, if 100 acres are occupied with 75 acres of corn and 25 of grass, about 32 bushels of corn will probably be raised per acre. But if 57 acres are occupied with grass and 25 with corn, the increased manure, and one half the total amount of labor, will give 99 bushels of corn per acre—just as much as before—with a great increase of stock, the land every year becoming more fertile.

Green Corn as a Manure.—A farmer in Bucks Co., Pa., a few years since, made some experiments going to show the value of growing corn for manurial purposes. On a field of forty-seven acres—part of a farm which had been rented for more than ten years, and had become as most rented farms do, very much impoverished—he sowed ten acres to corn in July, at the rate of two bushels per acre. It was left to grow until about four feet high, and then plowed under about ten inches deep. No manure was put on this part, but the remainder of the field was heavily manured, and the whole sown to wheat. The crop averaged 34 bushels per acre, that on the ten acres fully equal to that dressed with manure. We believe that lime was applied to the whole field before sowing on the grain—assisting with the deeper plowing, very materially in restoring the soil to a highly productive state.

Culture of Winter Barley.—J. Mackelcan of Hamilton, C. W., describes in the Genesee Farmer, the method of growing winter barley practiced by a farmer in that section, and formerly in England. He plows a clean wheat stubble, rather shallow, immediately after harvest; harrows it, and lets it remain until the weeds in the soil have grown up; then manures it heavily. The manure is spread and plowed in six or seven inches deep the middle of September, ridging it up into lands twelve to eighteen feet wide. He sows and harrows in the seed the first week in October—not earlier; two and one-half bushels per acre is the proper quantity. Put in this way, he thinks it less liable to winter-kill than wheat, and far more profitable than spring barley.

☞ The Ag. Society of the Muskingum Valley holds its show this year at Zanesville, Ohio, Sept. 18–21; President, Valentine Best—Secretary, F. A. Seborn.

THE CULTIVATOR.

ALBANY, N. Y., AUGUST, 1860.

☞ We give elsewhere as complete a list as our present data will afford, of the Agricultural Shows and Meetings of the coming Autumn. Will our friends oblige us by furnishing such additions and corrections as they can, in order that we may, if possible, hereafter incorporate with it all the other county and district Fairs to be held throughout the country? This end can be brought about if every reader will take the pains to supply any omissions or correct any errors that he may now discover.

Our list is especially defective in several of the Eastern States, in Pennsylvania, and at the South. At the west we have somewhat fuller returns, but there must be many omissions in all the States, unless it is Ohio, in which we think there cannot be many lacking. Several counties in this State are not yet set down, and we have almost nothing at all from several of the British Provinces.

Imperfect as this list is, however, it is a more complete one than we have ever yet seen published, and with the aid of our friends, as above requested, it can be greatly perfected with little farther difficulty. *Over Four Hundred Fairs are already embraced in it.*

MARKET DAYS.—

> At present we believe sales by samples are quite out of the question. Buyers will see what they buy, and will not trust samples.
>
> In conversation with some of our merchants, recently, this subject has been discussed, and we are ashamed to say that their estimate of the honesty of farmers in general is at a very low stand. Several of them tell of the most astonishing disregard of contracts and engagements, and give reason enough for their distrust. This they say will be long a difficulty in the way of establishing market fairs where grain and produce can be sold by sample, and we fear it is so. Of course all admit the punctilious honor and honesty of many, but still assert the reverse as a general rule.

So says the Homestead in commenting upon the subject at our head. We may mention an instance illustrative of the fact that in Great Britain the relative position of the Farmers and the Merchants, is exactly the reverse of what it generally is in this country. The "merchant," as we call him, who keeps the country store, is there looked upon as a tradesman or shopkeeper, and if there is any difference between his social rank and that of the farmer, it is most decidedly in favor of the latter. We regret to say that the common feeling here is too generally of quite the opposite kind; and, until the self-respect of the farmer can be elevated, he will not overcome the difficulty of keeping his sons at home instead of seeing them go away from the farm into any kind of mercantile or peddling trade that comes along.

The same feeling that prevails as to the relative standing of the two classes, is in Great Britain carried out with regard to their relative reputation for "punctilious honor and honesty," and the instance of this referred to in the foregoing paragraph, is the following:—The farmers in the Lothians who make their sales in Edinburgh, not only dispose of their crops by sample, which it is intimated that buyers here dare not do, but they actually *receive their money* on the credit of the sample and *in advance of the delivery of the grain.* The writer, in conversation with that excellent model farmer, Mr. HOPE of Fenton Barns, was inquiring in regard to the Edinburgh Markets, and was told that the farmers about there take up their samples, sell whatever quantity they choose to offer, pocket the cash, and do not deliver the grain sold until their return home. Asking how purchasers liked this arrangement, the answer was that they had often attempted to change it, but "the farmers were too strong for them." "We are known," was the reply, in effect, "as occupants of so much land, where we are always to be found—if we should not live up to our bargains, *there we are*, and the remedy is in the hands of the law. But what do we know about the corn-brokers? If they are at their stands today they may meet with misfortunes and be unable to pay what they owe us, to-morrow—at least we can't follow them up, and should not know where to look for our money."

In general, however, we presume payment is made upon delivery, but the great fact which "crops out" most strongly above, is that the power and public confidence are there *with the Farmer*, whose standing for probity, uprightness, and justice, or even generosity, in dealing with others is certainly unsurpassed by that of any other class in the community. The writer met incidentally with one or two cases, in which farmers whose contracts turned out unusually well for themselves in comparison with the results to the buyer, voluntarily relinquished a part of the advantage for the benefit of the latter; and, while we have also known of similar instances in this country, we regret that we *cannot* regard the strictures of our contemporary as wholly unfounded or uncalled for with respect to the dealings that take place among far too large a part of our farmers.

PROSPECTS OF THE ELMIRA FAIR.—We are glad to know that the prospects are now good for a thoroughly successful Show at Elmira. Secretary JOHNSON says, in the State Society's Journal, that according to present indications "the exhibition will be equal to those that have preceded it. Already notices of exhibiting stock, implements, &c., from different portions of the State are more numerous than they were last year at this time." The Prize List contains a new feature—"For the first time, the Executive Committee have offered a prize for the best bull, cow or heifer, in the five leading breeds—Short-Horns, Devons, Herefords, Ayrshires, and Alderneys—open to *prize animals*, heretofore receiving the first prize; to *American bred* and *imported stock*. Already we have assurances that this prize will be contended for; and animals equal to any heretofore exhibited will be on the ground, from our own as well as from other States."

> PULMONARY OR LUNG MURRAIN, is a name given by the Editor of the Homestead for the cattle disease in Massachusetts, to distinguish it from the common PLEURO-PNEUMONIA, which is a different disease, and not contagious.

We can see no object in thus complicating matters; this disease is popularly known as the *Pleuro-pneumonia* (or "the Pleuro" for short,) throughout Great Britain, and it can only be a source of confusion to christen it differently here. The "common Pleuro-pneumonia" has its aliases already—as "inflammation of the lungs" for instance, or simply Pneumonia, which seem quite sufficient for purposes of distinction.

> CHESS IN WHEAT.—Doct. Crane of Franklin, handed into this office last week, several stalks of wheat, the root of which was produced by one kernel of wheat. On these stalks are heads of wheat and heads of chess, each distinctly and fully formed and developed. It has been doubted whether chess ever comes from the well formed, healthy grain: but here is proof positive that it does, for in this instance one and the same kernel has produced both. The curious in such matters can see this sample by calling at the Democrat office.

We copy the above from the *Portage* (Ohio) *Democrat* of August 8, for the purpose of saying that the statement *cannot* be true. A careful examination will show that the chess and wheat have no natural connection with each other, and that each proceeds from its own root.

LEADING ENGLISH MANUFACTURERS OF AGRICULTURAL IMPLEMENTS.—The North British Agriculturist, in an article on the Canterbury Show, gives an estimate of the amount of business done by several of the leading firms, who do not this year exhibit. We quote, changing *pounds* into *dollars*:—The firms absent are Messrs. Clayton & Shuttleworth, who produce annually agricultural implements and machines to the value of $1,500,000; Messrs. Garrett & Sons, Ransomes & Sims, and Hornsby & Son, who each produce annually to the value of $500,000; Howard to the value of $450,000 to $500,000; Tuxford, Barret & Exall, and Samuelson, who each manufacture to the value of $350,000; Henry Clayton, to the value of $250,000; Smith Whitehead, of Preston, H. &. E. Crosskill, and one or two others, to the value of $100,000 to $150,000. "The absent firms exhibited one-third of the entire money value of the whole implement department at Warwick."

☞ In some recent Notes about Farming in Franklin Co., Mass., the production of Butter and extent of Stock feeding in the town of Greenfield were particularly referred to. We are now informed that the amount of Butter sent from Greenfield Station to Boston, for the year ending July 15, 1860, reached a total of 201,576 lbs., equal to 100 1576-2000 tuns. The number of cars of stock sent to Cambridge during the year, was 242; of which 142 were sheep, averaging 12,780 sheep; 100 were cattle, averaging 1,500 cattle; total 14,280.

Unloading Hay.—Can you give me the post-office address of Mr. G. H. Gregg. In the July no. of The Cultivator, on page 228, Mr. Gregg describes a mode in use among the Shakers of New-Lebanon, of unloading hay by means of hooks, which strikes me as being superior to the horse-fork, both as to the easement and dispatch. I have used a horse-fork now two seasons, and for me, (being a light man,) I find it hard work to govern the fork as it rises heavily loaded, and rather dangerous, when unloaded, of hitting the man on the mow when the stale falls. I wish to address Mr. Gregg, to get the dimensions of the hooks, that I may get them made, for I feel sure that they will be better for me than the horse-fork. John Moore. *Oxford, N. Y.* [We are unable to give Mr. G.'s address, but the above may perhaps draw out the information wanted by our correspondent.]

☞ Drs. A. S. Copeman, of Utica, and H. Moore, of Poughkeepsie, are the Veterinary Surgeons whose names are announced by the President and Secretary of our State Society, pursuant to the Resolutions passed at the last meeting of the Board and published in our columns, "*to attend to any requests* in relation to the cattle disease, should it appear in our State, and persons desire advice." We do not anticipate that they will have many calls from this source upon their time, but we publish their addresses, as being well qualified with reference to the Pleuro-pneumonia, in order that if any of our readers suspect the presence of the disease they may know to whom they may refer with confidence.

It may be remarked, in connection with this subject, that the Vermont State Society, in common with many in the Eastern States, have determined to offer no cattle premiums this season. As a measure of precaution throughout New-England, this is very well, but we see little reason for hesitation as to exhibiting cattle anywhere in New-York or other States. Our western friends in some localities appear to be exerting themselves somewhat to excite apprehensions—wholly without any reasonable cause so far as we can discover. Elsewhere the "panic" has apparently had its course. A correspondent writes us under date of Greenfield, Mass., July 30: "The cattle disease undoubtedly exists yet in Worcester county, but it *has never been west of the Connecticut river.*"

☞ Public attention was first called to the importance of *fast walking horses* for Agricultural purposes, we think, through the columns of the Co. Gent., and the suggestion made that our Societies should offer prizes, having in view the encouragment of this particular object. At the last meeting of the Executive Committee of our State Ag. Society, a communication was presented from Lewis B. Brown, Esq., of New-York, a life member of the Society. placing at their disposal the sum of $25 for premiums of this kind—a public spirited offer which was at once accepted by the Board, and, at the Elmira Fair the sum of $15 will therefore be awarded for the best and fastest span of matched horses or mares, and $10 for the best and fastest walking horse, mare or gelding. We learn that Mr. Brown has also offered a similar amount to be awarded at the National Horse Show at Springfield, Mass , the first week in September.

Velocity of Mowing Machines.—Mowing machines usually cut on an average a strip of grass a little over four feet wide. The knife is longer, but the driver cannot use its whole breadth without danger of leaving an uncut strip. If the speed of the horses, therefore, average two miles an hour, including stopping to clear obstructions, turning, &c., just one acre will be cut in an hour. In ordinary practice, the various delays reduce the amount to nearer an acre in two hours. We observe, however, in the last number of the *New-England Farmer*, an account of the operations of a newly made Ketchum mower, on the farm of J. B. Shurtleff, near Boston, where over an acre was cut at the rate of an acre in twenty-four minutes. The grass was a ton and a half to two tons per acre, and the weather excessively hot and close. On the previous day, which was cool, the same team and machine is reported to have cut an acre in fifteen minutes.

The knife bar was six feet long, and the swath averaged five feet and six inches—requiring three swaths to make a rod wide. Consequently, a mile and a half must be travelled for each acre; and in cutting the acre in 24 minutes, as above stated, the speed of the team, *including all stoppages*, must have been three miles and three-quarters per hour; and in cutting the same amount in fifteen minutes, as reported, the average speed, also including stoppages, must have been *six miles an hour.* Is there not some mistake in the statement?

Large Premiums.—The Directors of the Livingston County Agricultural Society offer the following premiums, to be competed for at their Annual Cattle Show in Geneseo, occurring September 26, 27 and 28:—

Best thorough bred Durham Bull, 3 years old or over,........	$100
Best 2 years old Durham Bull................................	30

Competition is open to the United States and Canada. The Awarding Committee consists of Hon. A. B. Dickinson, Hon. James S. Wadsworth and Messrs. Freeman, Barber and Blake.

Wheat from the North Later in Ripening.—A farmer in Pennsylvania, thinking that seed wheat from the North, like seed corn, would ripen earlier when taken South, last year procured several bushels from Canada, two hundred miles north, and sowed it at the same time with home-grown sorts. It ripened, according to the Genesee Farmer, two weeks *later* than the native seed, as we might reasonably expect.

North Carolina.—A correspondent in New Hanover county, writes us that there is a decided spirit of improvement among farmers, manifest in that county, and that the County Ag. Society have purchased a beautiful sight for their Fair grounds on the plank road near Wilmington, and will soon commence the erection of the necessary buildings, &c., to put their grounds in order for the coming Fair. That portion of his letter in relation to the chief crop of his vicinity will be published next week.

☞ We are indebted to a friend who arrived last week by the Persia, and who was present at the recent Paris Agricultural Show, for a copy of the Prize List and Catalogue of the Exhibition, which certainly deserves a brief notice in these columns, although we have not the space at command to give anything like a just idea of the extent of the ground covered, and the apparent perfection attained in all the arrangements and regulations concerned.

The Catalogue contains 650 pages half the size of those of the Co. Gent., in paper cover, with large plates folded in, representing plans of the grounds, and of the *Palais d' Industrie* where the Exhibition was held—the whole sold at the marvellously low price of *one franc* (20 cts.) Seventy odd pages are filled with the decrees establishing the prizes and regulations, together with the names of officials. Then follow *Les Especes Chevaline et Asine* (Horses and Asses) to the number of 788, divided into English blood, Arabian blood, and Anglo-Arabian blood horses; half-bloods for Coach-Horses, comprising Normans and other French breeds classified according to the Departments from which they come; "light" carriage horses, and heavy and light draught horses in similar classification, concluding with the breeds of Asses of Poitou and the Pyrenees. The entries of Cattle are 1,475 in number—the pure French races, followed by the Durhams and Ayrshires as representatives of England, then the Holland and Swiss breeds in classes by themselves, then every imaginable cross of the Short-Horn, concluding with other mixed bloods. The entries of Sheep were 548; of Swine, 243; of Poultry, (a few goats included,) 921; of Bees, 1; under the head of *Instruments*, 3,976, including not only all sorts of implements, but also books, plans and engravings; of "Products" 3,615, under which head come Butter and Cheese, Wines, Grains, Vegetables, Tobacco, and almost every sort of agricultural production, whether in the raw or manufactured state. The whole concludes with a list of five or six hundred samples of Algerian products.

We have made no calculation of the aggregate amount of the prizes offered, but when we say that first prizes for horses run from 800 up to 1500 francs, ($160 to $300,) first prizes for cattle from $100 to $140, and for sheep and swine from $60 to $80, it will readily be seen that with so many classes the amount could not have been by any means a trifling one.

THE POTATO DISEASE.—It has already indicated its presence among us. Some two weeks since our tops showed signs of affection, but the cessation of rains for that time has stayed the progress of the disease in a good degree. Some early kinds have rotted, and all our different varieties are plainly predisposed to the malady. All that seemed necessary to hasten the terrible calamity was rain, and we are this—Monday—morning, getting a plentiful shower, and may now look for the work to progress with fearful rapidity. Strange disease! this potato rot. Who shall satisfactorily explain its causes? S. W. R.

Clinton, Oneida Co., Aug. 13.

☞ Mr. Obed Hussey, of Baltimore, the inventor of numerous improvements in Agricultural implements and machinery, but best known from the Reaper which bears his name, recently lost his life at Exeter, N. H., by falling between the railway cars, his seat in which he had left for the purpose of procuring a glass of water for a little child near him who complained of thirst. Mr. H. was a native of Maine it appears, and was on his way thither upon a visit. He was 68 years of age, and a worthy member of the Society of Friends. We have had few more persistent and industrious inventors, but many who with less desert have been more the favorites of fortune.

REAPING MACHINES IN FRANCE.—The results are now before us of the Imperial Trial of Reaping Machines at Fouilleuse the first week in August. "It was in every way an important one," writes the Mark-Lane Express, "whether we take the English firms, as represented on the occasion, or in comparison with the French manufactures brought out to oppose them. The entries reached to thirty-nine, and the nineteen English included Burgess and Key's M'Cormick; Cranston's Wood; Bell's; and Cuthbert's; while there were five of the French. In so bad a condition, however, was some of the crop, that only two machines got through their work in good time—Burgess and Key, and Dr. Mazier. The award was ultimately thus declared: 1st prize and grand medal of honor as the best of all machines tried—Burgess and Key; 2d prize—Cuthbert; 3d prize—Wood. French machines: 1st prize—Dr. Mazier; 2d prize not awarded; 3d, Legendre. The Emperor himself was present at the trials, and evinced much interest in examining the several implements at work."

FATTENING CATTLE ON EARLY CUT HAY.—A writer in the Boston Cultivator, says that "John Ball, of Langdon, has fattened cattle every winter, for more than twenty years past, on no other feed than hay." He generally commences haying about the 20th of June, and reserves the hay first cut, for feeding that portion of his stock intended to be sold for beef in the spring. Hay allowed to ripen its seed is of very little value; though the whole should be eaten by stock, the seed remains undigested, and therefore furnishes no nutriment.

☞ We are indebted to Dr. ANDREW MCFARLAND, Jacksonville, Ill., for a copy of his Report as Commissioner from that State to investigate the Massachusetts Pleuro-pneumonia cases. The Country—outside, at least, of the districts which have been the sufferers—will not be without cause for thankfulness in this Cattle Disease attack, if it should have the effect of calling more general attention to the importance of some thorough veterinary knowledge on the part of Farmers themselves, and of a higher standard among those who practice as "Cattle Doctors." Nor will it do any harm that many members of the Medical Profession should have been lead, like Dr. M., to investigate more minutely the anatomy of an animal in which so great pecuniary interests are involved, as in the Ox.

☞ We learn from Mr. WEBB that the South-Down ram hired at his last Letting, and subsequently purchased, by Mr. J. C. TAYLOR of New-Jersey, is the one which he exhibited at the Royal Ag. Society's Canterbury Show, and which there received the *first prize of* £20.

☞ The Philadelphia (Pa.) Society for Promoting Agriculture, is to have an exhibition this year, September 25–28, at Powelton, near that city—Dr. A. L. Kennedy, Secretary. The following Premium is a new feature:—

The Society has been authorized by ELIAS BOUDINOT, Esq., a member, to offer a premium of Fifty Dollars for the best display of RUSTIC SEATS, for the Piazza or Lawn, to be competed for by young farmers, being their own invention and production. It is hoped this handsome premium will attract many competitors.

☞ The Premium List of the Albany Co. Ag. Society is now ready for distribution—show on the Washington Parade Ground in this city, Sept. 18–21. President, Wm. Hurst; Secretary, Jacob C. Cuyler.

☞ The Second Circular of the Maryland Agricultural College, for which we are indebted to some attentive friend, contains the Catalogue of Students at its First Session—nearly *seventy* in number, so that it may now be considered fairly under way. Pleasantly and accessibly located, it will undoubtedly become a favorite with parents in all the Southern States, and we notice that the two Carolinas, Virginia, Georgia, Delaware, the District of Columbia and Pennsylvania, are already represented among the pupils. Hon. CHAS. B. CALVERT is President of the Board of Trustees, and Dr. MONTGOMERY JOHNS, of the Faculty of Instructors.

☞ Mr. J. WESLEY JONES of Chatham 4 Corners, has shown us some very handsome Hollyhock blooms raised by him the present season, including among others the following sorts:—Solfaterre, Pink Perfection, Purple Defiance, Pride of Denmark, Floral Beauty.

☞ "The Register of Rural Affairs" for 1861 will soon be out.

WATER FOR BEES.—According to a recent work on Bee-Keeping, when bees are building comb rapidly they require a great deal of water. When a supply is not convenient to the hive, it recommends to make a shallow trough, and put in a lot of gravel, sand, and the like, and renew the water daily, leaving the gravel and stones partly exposed, so that the bees can get at the water without fear of being drowned.

LEICESTERS VS. COTSWOLDS.—The owner of a large stock farm in Canada, who gives much attention to these two breeds of sheep, has nearly two hundred Leicesters, all descended from Bakewell's flock, and several of them imported directly from that celebrated breeder. According to a notice in the Genesee Farmer, his Leicester ewes generally produce two lambs each year; "he gives them the preference to the Cotswolds, and estimates that he can obtain as much mutton in two years from a certain number of Leicester ewes, as he can in three years from the same number of Cotswolds. He thinks they consume less grass than the common sheep, and finds an acre of good grass will keep ten of his sheep throughout the summer." His sheep are wintered on pea straw and turnips—of the latter he grows annually about ten acres, averaging 1,200 bushels per acre. B. [As Mr. Bakewell died in 1795, there is some reason to doubt whether there are sheep in Canada or elsewhere, "imported directly from that celebrated breeder."]

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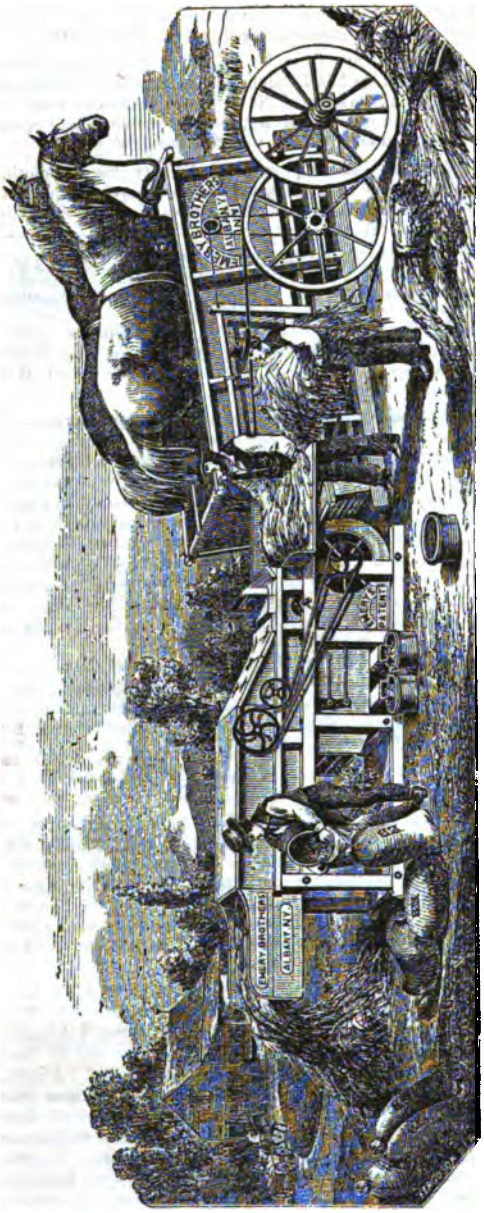
AMERICAN GLIMPSES OF AGRICULTURE IN GREAT BRITAIN. By LUTHER H. TUCKER of "The Country Gentleman," and Treasurer of the New-York State Agricultural Society. A pamphlet, 58 pages, 8 vo.

Mr. Tucker has furnished a very interesting account of his observations upon British Agriculture, made during a recent tour, to the Transactions of the N. Y. State Agricultural Society. His letters to the COUNTRY GENTLEMAN have embodied the same general matter, and here it is presented in a compact and convenient form for reading and reference. Few persons have ever written from observation upon the agriculture of any country, who have in so excellent a general view, given so many desirable details or so much of value, in equal compass.—*Hartford Homestead.*



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☞ For further particulars and descriptions, see the recently published ILLUMINATED CATALOGUE of the ALBANY AGRICULTURAL WORKS, WAREHOUSE AND SEED STORE, which is furnished gratis on application and receipt of three cents to prepay postage on same. Local agents solicited where none are now appointed, to whom liberal discounts will be allowed. Address EMERY BROTHERS,

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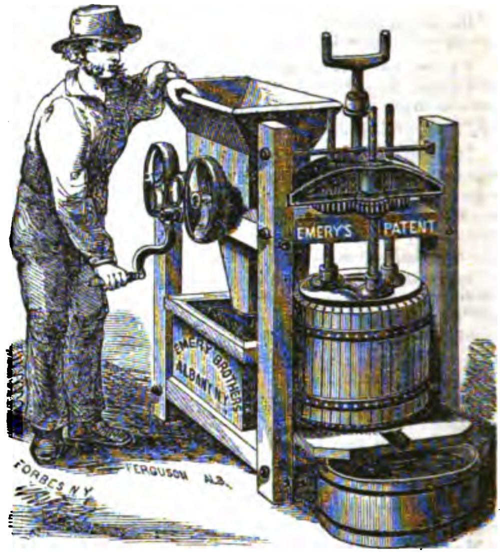
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The above valuable work—the best, we have no hesitation in saying yet issued upon the subject—is for sale at the office of this paper.

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Aug. 9—w&m1t.

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for the spring trade large numbers of our Mohawk Valley Clipper Plows with steel mold-board and land-side, with steel or cast point, as desired, and would refer you to the following persons, who have them in use:

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EIGHTH NATIONAL EXHIBITION.

AT CINCINNATI, OHIO, SEPT. 12th—20th.

The UNITED STATES AGRICULTURAL SOCIETY will hold its Eighth Annual Agricultural and Industrial Exhibition on the grounds liberally provided by the citizens of Cincinnati, which are to be fitted up in the best style. There will be Halls and Tents for the display of IMPLEMENTS, MACHINERY, TOOLS, DOMESTIC MANUFACTURES, FARM AND GARDEN PRODUCE, FRUITS, FLOWERS, and NATIVE WINES; with Stalls and Pens for HORSES, CATTLE, SHEEP, and SWINE; and an unequalled Track, one mile in length and forty feet in width, for the exhibition of Horses. The Premiums offered—in cash—gold, silver and bronze medals—diplomas and certificates, amount to

$20,000.

The Exhibition will remain open from Wednesday, the 12th, to Thursday, the 20th, of September, thus giving time to examine and test the implements and machinery.

For premium list or information, apply at the Office of the Society, No. 356 Pa. avenue, (up stairs) Washington, D. C., or to the subscriber, at Cincinnati, Ohio. BEN. PERLEY POORE.
Aug. 2—w6t. Sec'y U. S. Agricultural Society.

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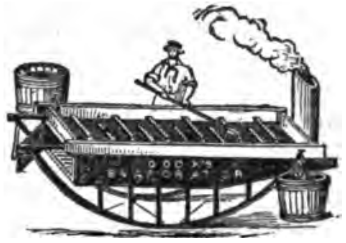

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We, the undersigned, having ordered largely of the Austin Seedling in May last, with the assurance that our money would be refunded if not satisfied, after seeing the fruit beg leave to report, that we have visited Watervliet, the Shaker settlement, where the Austin is now fruiting. We found it growing in the most common way, in masses, and not in hills, without any particular care, and much injured by the drouth; yet the great productiveness and uniform large size and fine flavor, induces us to consider the Austin as one of the best varieties in cultivation, and a great acquisition to our small fruits. We found the Austin averaging larger than the Wilson's Albany, and about as productive; and from appearances will continue to fruit until the middle of July.

JOHN C. THOMPSON, Tompkinsville, Staten Is., N. Y.,
JAMES L. LOCKWOOD, Stamford, Ct.,
EDWARD BISHOP, Stamford, Ct.

Aug. 23—w6tm2t.

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Aug. 23—w1t.

THE ILLUSTRATED ANNUAL REGISTER OF RURAL AFFAIRS.

1861.

THE SEVENTH NUMBER of this attractive and useful Work is now nearly ready for the Press. We hope to have it out some weeks earlier than usual, and are now prepared to receive orders for single numbers or in quantity, which will be filled as soon as the Register for 1861 is issued. The attention of Officers of Agricultural Societies and others who propose attending Town, County or State Fairs this Fall is particularly requested to the ready Sale which may be had for the Register during these anniversaries, and on other occasions, from the First of September even until another spring. TERMS—as heretofore: SINGLE COPIES, postpaid, Twenty-Five Cents; ONE DOZEN COPIES, postpaid, Two Dollars; ONE HUNDRED COPIES, Fifteen Dollars, and larger quantities at a farther reduction.

TO ADVERTISERS!

TWENTY PAGES only will be devoted, as in the previous issues, for 1855, '56, '57, '58, '59, and '60, to ADVERTISEMENTS. The number being limited, more or less applications have each year arrived too late for admission upon them; last season several of our best friends and advertising customers were thus disappointed, and on this account, as well as in order that the work may be expedited as much as possible, it is desired that all who wish for space should send in their advertisements immediately. Notwithstanding increased circulation, prices remain for 1861 as heretofore:

One Page, ... $20.00
One-Half Page, ... 12.00
One-Third Page, ... 8.00
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PARTIAL ABSTRACT OF CONTENTS.

Among other valuable chapters, the Annual Register for 1861 will contain the following:—

I. WORKING MEN'S COTTAGES—Seventeen Engravings.
  1. Important Advantages of their Erection.
  2. Design for a Cottage of the Smallest Size.
  3. Design for a Cottage on a somewhat Larger Scale.
  4. Design for a Cottage of better class or for a small Farm House.
  5. Design for a somewhat more costly Cottage.
  6. A Design by L. R. Valk.
  7. A Design by J. M. Wade, with modifications.
II. LAYING OUT GROUNDS—Five Engravings.
  1. Plan of a Village Half Acre Garden.
  2. Simple but Graceful Arrangement of Pleasure Grounds.
  3. Laying out a Western Farm.
III. PRUNING AND TRAINING ROSES—Eleven Engravings.
  1. Tree Roses; two modes with figures.
  2. Weeping Roses.
  3. Pillar Roses.
IV. NEW FRUITS AND POMOLOGICAL NOTICES—Twenty-one Engravings.
  1. Basket of Plums—Descriptions and Figures of 15 newer Sorts.
  2. Notes on Strawberries—Results of the Farther Experience of the Year.
  3. Pruning Dwarf Pears.
  4. Accurate Portrait of a Dwarf Pear Tree in Bearing.
  5. How to Obtain Fruit in New Places.
V. STRUCTURES FOR GREEN HOUSE PLANTS—Ten Engravings.
  1. Construction and Management of the Cold Pit.
  2. The Conservative Pit.
  3. Ward's Cases.
  4. The Window Case and Aquarium.
  5. Translucent Paint for Glass.
VI. DOMESTIC POULTRY—Thirty-three Engravings.
  1. Origin of Domestic Fowls.
  2. Descriptions at Length of the Different Breeds.
  3. Management of Poultry.
  4. Five Designs for Poultry Houses.
  5. Nests, Pens, Coops, Feeding Hoppers, &c.
  6. Diseases of Poultry.
VII. WEEDS AND THEIR DESTRUCTION—Twenty-one Engravings.
  1. General Rules for their Prevention and Extirpation.
  2. Annual and Biennial Weeds.
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  4. Creeping Perennial Weeds.
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VIII. FILTERS, AND FILTERING CISTERNS—Five Engravings.
  1. Construction of Portable Filters.
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X. HORTICULTURAL NOTES.
XI. RURAL MISCELLANY.
XII. DOMESTIC ECONOMY, &c., &c.
XIII. ADVERTISEMENTS

This, preceeded by the usual Calendar pages and Astronomical Calculations, forms a book which is certainly cheap at its retail price, while the Publishers may especially call attention to the pithy and appropriate HINTS FOR THE MONTH which appear upon the Calendar pages, as embracing in the most concise form many valuable suggestions—to the article on WORKING MEN'S COTTAGES, for the neat and useful Designs it contains—to those upon ROSES and GREEN HOUSE Structures for their beautiful illustrations—to that upon POULTRY as the most complete chapter upon the subject yet presented in equal space, accompanied as it is by so many Engravings—and to that upon WEEDS and their Destruction, as presenting just the information which every Farmer requires, with cuts by which he can compare the most common and troublesome of these intruders, and appropriate practical directions how to get rid of them.

THE PUBLISHERS, with the view of rendering the circulation of the Annual Register for 1861, still wider and larger than that of any previous Number, are prepared, as above intimated, to offer the most liberal Terms for its introduction in quantities, either to Agents, Agricultural Societies, Nurserymen, Dealers in Implements and Seeds, or any others who take an interest in the dissemination of useful reading, and in the promotion of Rural Improvement.

Address all orders or inquiries to the publishers,

LUTHER TUCKER & SON
Albany, N. Y.

THE CULTIVATOR.

THIRD] TO IMPROVE THE SOIL AND THE MIND. [SERIES.

VOL. VIII. ALBANY, N. Y., OCTOBER, 1860. No. 10.

PUBLISHED BY LUTHER TUCKER & SON,
EDITORS AND PROPRIETORS, 395 BROADWAY, ALBANY, N. Y.

J. J. THOMAS, ASSOCIATE EDITOR, UNION SPRINGS, N. Y.

AGENTS IN NEW-YORK:
C. M. SAXTON, BARKER & Co. Ag. Book Publishers, 25 Park Row.

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"THE COUNTRY GENTLEMAN," a weekly Agricultural Journal of 16 quarto pages, making two vols. yearly of 416 pages, at $2.00 per year, is issued by the same publishers.

THE MUCK MINES OF THE FARM.

No farmer need seek for a richer *placer*, who has a muck mine upon his premises. He has a triple advantage in the work of enriching his land, over those who have not been thus favored. For muck is not only a fertilizer of itself, but it possesses the power of enhancing the value of other manures—the process of fermentation by which they suffer some loss, giving, in admixture with muck, a greater value to three or four times the material which could otherwise be secured. As an illustrative proof, we might quote the statement of the late Elias Phinney, of Massachusetts, who by the mixture of twice the amount of dry muck with the manure from his stables, secured a fertilizer, which he assured the editor of the *N. E. Farmer*, was of higher value than the droppings alone, load for load. "His operations," says the *Farmer*, "were extensive, and conducted in a systematic manner, and the conclusions to which he arrived in relation to them, have been abundantly sustained by other experimentalists, and by careful analysis of scientific men." According to Prof. S. W. Johnson, "the excretion of any animal, mixed with muck is rendered more valuable, from the fact that the muck absorbs and saves the ammonia," a volatile gas which would otherwise be dissipated to a considerable extent by fermentation. The value of the muck compost is greater also, from being better proportioned to the wants of plants. Still, manure alone, if properly taken care of, is too rich; for, according to the same authority, "plants over-stimulated with ammonia, produce much foliage and few seeds."

Our present purpose, however, is to offer a few hints on "working the mines," or securing a supply of muck for future use. The best deposits are usually too full of water for digging in fall or winter, and can only be drawn upon during the dry weather of midsummer. The same season—the time between the early and later harvest—usually presents some leisure for the work. Besides, when comparatively dry, there is less weight to move, and the material is in a better state for use. It will lie more lightly in the heaps, and thus gain greater exposure to the air while "seasoning." When muck is dug out and piled on dry land, the air and rains gradually dissipate the acid which most specimens contain, and which must be dispelled or neutralized before it is available nourishment for plants. It also needs drying to become available for use as an absorbent of the liquids of the stable—a use of much importance in increasing the stock of manure. Muck readily becoming friable under the action of the elements, is a valuable fertilizer for loamy and sandy soils alone. If it contains much acid, this should be neutralized by fermentation—most readily brought about by mixing with animal droppings, as spoken of above.

Speaking of the quantity of muck which may be used in a season, the *Homestead* remarks that it bears some proportion to the number of animals kept upon the farm, and puts it at from fifteen to twenty-five loads for each cow, ox, or horse, and ten loads to each yearling swine. At least half a load to every sheep, we think, may be spread over their yards, which should be kept littered with straw while occupied in the winter. Early in spring let the whole be drawn out, (mixing the strawy and mucky portions together while handling,) and placed in a heap, and it will prove very valuable for the fall wheat, or, indeed, any crop on the farm. A few loads should be placed where the wash and slops of the house can be poured over them; it will soon become valuable manure, and should be drawn away and replaced with a new supply.

When the muck beds are distant from the barn, and the material is wanted for application to lands near by, there is no need of carting the muck to the barn and back at a large expense. Get out the muck now, and heap it on the fields where needed. When the stock come to the stables in the fall, draw the manure at once to these fields, and as long as allowed by the frost, mix the two together, one load of manure to two of muck, and it will only require one turning, and few weeks of warm weather, to fit it for corn or other crops. Or it may be composted in the spring with lime, ashes, guano, bone dust or other alkaline or nitrogenous material, decomposing in a short time, and furnishing a manure of equal value to that from the barnyard itself.

The conceded value of muck for increasing the quantity and quality of available home manures, renders it worthy the attention of every farmer within whose reach it lies. Thousands of swamps are now accessible, and there are few places where muck, either from these frequent large deposits, or from the beds of sluggish streams, the margins of ponds, the hollows of wooded hills, and like situations, cannot be procured to any desirable extent by the enterprising farmer. Yet we are surprised, upon inquiry, to find so few who avail themselves of the resource, in comparison to those who might do so. But those who have once given it a fair trial, never cease to pursue the practice—it proves too profitable in wheat and corn, in meadow and orchard—in the improved character of every product of the farm, to be neglected by any who have ever tested its value. It is a mine of gold to every cultivator of the soil—giving golden grain—golden dairy products—golden fruit—gold in the pocket.

Top-dressing Meadows and Pastures.

We have repeatedly called the attention of our readers to the favorable results usually following the surface manuring of grass lands, and believing, as we do, that good crops of grass lie at the very foundation of good farming, we keep careful watch for facts which shall help carry the conviction to the minds of farmers in general. A few such are condensed below:

The last "Journal" of our State Ag. Society contains among other interesting matter, some notes of a "trip to Westchester," by Secretary JOHNSON. Near E. G. Faile's "the grass crop was light, owing to the severe drouth prevailing in that section of the State." But "Mr. Faile's grass land had been top-dressed, and his yield this year was larger than usual, averaging, we think, three tons to the acre, his meadow-fields showing a fine healthy, green aftermath," while those around were generally scorched by the sun. Col. J. adds: "Mr. F.'s practice is undoubtedly the true one, and every farmer in that region will consult his own best interest by enriching his meadow land by a thorough top-dressing of manure."

The Genesee Farmer for August has an account of a visit by the editor to the farm of Jos. Wright of Waterloo, Seneca county, and among other items mentions Mr. W.'s practice of composting his barn manure with swamp muck—"the compost, when well rotted, making an admirable dressing for grass—or indeed any other crop; but Mr. Wright values it especially for the former purpose." Mr. Harris saw a 28-acre field of timothy, (four years from seeding,) that was top-dressed with this compost the early part of last winter. The crop is remarkably even all over the field, and, he remarks "we never saw anything handsomer." Two and a half acres of compost-dressed timothy had been cut, and yielded seven large loads of hay that it was thought would weigh 25 cwt. each. This would be three and a half tons per acre." Four acres of top-dressed clover had produced eleven large loads of hay. On another 8-acre field of timothy, Mr. W. had applied 40 loads of raw muck per acre, with decided benefit, though not as great as where the muck was first composted with manure.

The same paper speaks of Jas. O. Sheldon's farm, near Geneva, N. Y. "Mr. S. is much in favor of top-dressing his grass lands. One field of timothy of 30 acres, was top-dressed with from ten to fifteen loads of rather strawey manure, the early part of March. The manure has all disappeared in the dense sward, and the crop of timothy is very fine." Mr. Sheldon has made some experiments in sowing *salt* on the land at the time of seeding to grass in the spring—and finds the effect quite marked. The Farmer says—"he sows ten quarts of timothy and three quarts of clover seed per acre. In a 30-acre field, seeded down about the 10th of May, 1859, fifteen acres received a bushel and a half of salt per acre, sown broadcast at the time of seeding; and on this portion of the field the seeds took well, and the crop this year, is much larger on the salted than on the unsalted portion."

Speaking of manuring at the time of seeding, we have this year tested the advantage of several applications for that purpose. On a sandy loam field, where grass seed was almost a total failure last year, it has this year succeeded well—partly from being top-dressed with plaster, and somewhat from the more favorable season. Where we top-dressed with composted muck and barn manure the clover is large and thick, and the same is true of a small plot dressed with house ashes. On another plot sown with salt, we think the clover is more uniformly successful, though the growth is not large, than where no fertilizer, save plaster, was applied. The more clayey portion, however promises the best clover—but it may not stand as well the "heaving out" of next spring's trying weather.

APHIDES ON YOUNG TREES.

We tried a successful experiment on these insects, which had copiously infested the top leaves of several thousand young standard pear trees three or four feet high, and one year from the bud. Two or three pails of strong soap suds, the refuse of a common washing, were used for this purpose. One person held the pail while another carefully bent the top of the tree downward, and thrust it with its throng of aphides into the soap. One or two thousand trees were thus easily treated in an hour, and none were left alive, except a very few where the work was rather superficially performed.

Having recently had an inquiry on this subject, we give this as the answer. Water alone will not drown them when applied in this way; oil will kill them, and the tree also; while soap combines something of the acridity of the potash, the pore-closing quality of the oil, without either injuring the leaves or bark.

BAROMETERS FOR FARMERS.

Considerable is being said and written, "about these days," as to the utility of Barometers for agriculturists. As I am somewhat ignorant of their virtues, I wish to inquire if changes in the mercury do invariably foretell a change in the weather—in other words, does a falling of the mercury denote the approach of a storm, or may it not be only a coming change of wind or temperature of the atmosphere, not always accompanied as we know by a storm properly? I wish those who have used them for years, would give through the GENTLEMAN, some account of their practical utility before we are all called on to pay our $5 or $10 for something which *possibly* (not probably) will be useless. W. J. PETTEE. *Salisbury, Ct.*

We have used a barometer for many years, and although not infallible, is very useful and valuable. Its usefulness varies in different localities—in some places its indications are more certain than in others, owing to the different character of the weather, nature of winds, mode of approach of storms, &c. In summer, a considerable fall of the mercury has nearly always been followed by rain, but sometimes the rain and descent of the mercury are simultaneous—in winter by wind. During rainy weather, its rise has invariably preceded a cessation of the rain. In some instances, its indications have been striking. In one instance, the wind had changed from rainy to a clear quarter, and every weather-wise neighbor was sure the clouds would clear away and give a fine day; but the barometer said, "No such thing! it rains to-day." In other words the mercury was falling. And accordingly it continued showery all day. Again—the neighbors have said, "We shall have rain in an hour"—clouds thickening, wind south, &c. But the barometer stood immovable; and no rain came, till some hours after it began slowly to sink. We think every large farmer should have a barometer—it will probably pay for itself during each season of hay-cutting and harvesting—in some localities it may not. The best way to understand its movements, is to watch it for one season. We prefer the single column of mercury, without the circular dial plate and index, the latter being less accurate, and not nearly so satisfactory. The cost is $9 to $12, for such a one as will answer the farmer's purpose.

◆

DOMESTIC TOILS.

Kitchen toils and domestic cares are extremely oppressive on many excellent women, especially among farmers' wives, who are frequently worn down and bent under premature old age at middle life. They cannot be free from care and toil, neither is it desirable that they should be; but the excessive weight which some have to bear, calls for more effort towards relief. There are many who are compelled to rise at dawn, and commence a routine, which only closes late in the evening—and even then rest does not come, when the care of young children, and possibly of sick ones, precludes in a great measure the wholesome and refreshing repose of sleep. It requires a stout constitution for a woman to wash, iron, mend, scour, bake, milk, churn, sweep, cook three meals daily, as often wash dishes, and go through other routines for supplying daily food, besides the care of a family of young children, whose endless wants are a continued interruption to all other operations,—without soon being broken down by these ceaseless toils.

A very common course is this:—The mother labors incessantly, in order to give her daughters school education, and perhaps to render them "accomplished;" while they are learning, or playing the lady, she is struggling under a mountain of drudging, until she gets them "married off." They in turn, for the first time, are compelled to assume the same course of labor—the change sours and disheartens them, and the bloom and elasticity of youth have all disappeared before the first ten years have gone; while the greatly higher object of living, namely the continued cultivation and improvement of the mind, forever ceases.

Whatever unfeeling, selfish, and ill-bred men may say, one thing is proved by the history of the human race, and that is, the farther a people advance from the savage or barbarous state, the greater is the improvement in the physical and mental condition of woman. There are no exceptions. All *civilized* men will therefore seek assiduously for the means that shall relieve the condition of women, and restore them from the state of mere drudges for the benefit of the men, to a condition of high domestic usefulness and mental refinement. What are the means for accomplishing this desirable end—of relieving the housewife from tiresome, weary, ceaseless labor? We mention a few—simple, homespun, and practical.

1. Provide domestic conveniences. Let the wood-house be level with and adjoin the kitchen, and be always supplied with good fuel and dry kindling wood; let the well be provided with the best apparatus for drawing water easily—provide ample cisterns, and connect them by means of good pumps with the kitchen—procure the best cook-stove, washing machine, easy churn, butter worker, clothes frames, carpet sweeper—and if needed, the family sewing machine should not be overlooked. We have known the time when at least one active domestic was required to perform the extra labor of the various operations of building fires of wet wood, working an awkward churn, washing on a rickety washboard, scrubbing the floor with a worn-out broom, tying the clothes line to a peach tree, horse-post, barn corner, and smoke-house, borrowing water at a neighbor's, driving the pigs out of the yard, making sour bread for want of good wood, making rancid butter for want of a good dairy, and deficiencies in smaller domestic appliances.

2. Let the man of the house and such of his assistants as occupy it, provide themselves with slippers, and then, instead of marching with dirty boots directly into the neatly kept rooms, place them in a proper outer closet and assume the slippers—and if the soiled working coat should also give place to a cleaner one, it would appear more like civilization.

3. In order to lessen the heavy work of providing meals extensively for workmen, erect cheap and neat cottages, so that laborers may board themselves, as we have elsewhere recommended.

4. Adopt a simpler fare. We have known men so fond of good eating, as to keep several members of the family occupied from dawn till dark in cooking fine dishes, baking or roasting costly meats, and manufacturing delicate pastry, with all the numerous appurtenances belonging to this system of gormandizing. In one case, the man who ordered these luxuries had to take a blue pill once a fortnight to set his machine straight, which was constantly deranged by high living.

5. Bring up girls to labor cheerfully with their own hands—to make themselves generally useful—to regard active employment as infinitely more honorable than to be nothing but simpering, giggling, coquetting rag babies. Then when they are compelled to take hold with both hands, the charge of a family will be natural and comparatively easy; and instead of being soured because they do not find in real life what they had read of in sentimental novels, they will find much happiness in two ways,—one, in overcoming difficulties,—and the other in conferring happiness on those around them in a hundred little ways.

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PRUNING ORCHARDS.

Will you be good enough to give me some information about pruning apple and peach trees—the best time of year to prune, and whether to thin out or shorten in—and also the cherry tree? A. B. *Wash. Co., Penn.*

Very few orchards are properly pruned. If young trees are judiciously *thumb-pruned*, so as to keep an even and regular head, very little after pruning will ever be necessary. But when young trees have been neglected, the evils of dense tops, crossing and crooked limbs, and a bad shape, must be gradually removed by cutting away a portion each season, for several successive years. Observe carefully before cutting,—with a view to make an even symmetrical head, to avoid if possible large wounds, and to let the light in from the outside, and not to trim up below or inside, the latter being the common way in which orchards are distorted and ruined. Peach trees must be cut in carefully and evenly from the outside, so as to keep a moderately open and handsomely shaped head, of limited dimensions. Unpruned peach trees after a while have long naked branches, and little foliage—by cutting in, the tops remain neat in form, compact in foliage, and bear full and excellent crops. Summer is a good time for the work. The cherry needs but little pruning—only to keep the tree within proper bounds, and of good form.

Editorial Notes Abroad.

No. XXXV---An English Dairy Farmer.

[We defer until another opportunity the continuation of the subject of "Agricultural Education in Ireland" in the midst of which our last "Notes" were broken off—in order to present the following Memoranda of a Visit in August, 1859, at Burley Hall, the residence of Mr THOMAS HORSFALL, near Otley, Yorkshire, whose contributions and experiments upon various ways of cattle feeding, &c., have attracted much attention. It is proper to remark, in order to account for the fact that some of the statements made below have already found their way into the papers—that these Notes formed a part of Lectures prepared by the writer for the New Haven course last year, an abridged report of which has had some circulation among our contemporaries, although never as yet published in the columns of the Co. GENT.—EDS.]

Mr. Horsfall has not so extensive an establishment as I had prepared myself to anticipate, but I regarded the time expended there as employed quite as usefully, as any other equal number of hours during my whole absence. The farm includes not quite sixty acres along the bank of a pretty little stream, either the Wharfe itself, or flowing into it, I am not certain which. Forty-three acres, or fully three-fourths of the whole, are in grass. The stock upon the place, at one time and another during the season, had been as follows:

Heifers and bullocks,..........	21	Two tups and 62 ewes,........	64
Milch cows,......................	20	Lambs,..........................	106

Likewise four pigs, two horses, and a pony.

Making a total of small cattle and large, numbering 218 head—a tolerably heavy stock for sixty acres to carry. The land not in grass was employed as follows:

Wheat, 2½ acres.	Oats, 3½ acres.
Kohl Rabi, one acre.	Mangolds and Swedes, 3½ acres.

Beans, three acres—one acre of winter beans, and two of a long-podded garden variety.

The winter beans, sown in October, were then, Aug. 17, just harvested, and had turned out apparently a good crop. It is one of which Mr. H. is quite fond; it is out of the way sooner than spring beans, so that the ground may be more readily prepared for a succeeding crop of wheat. This is sown without manure, the land being already so rich that it is difficult to give the straw stiffness enough to stand up till harvest. On the wheat field of this year, (2½ acres,) 15 cwt. of salt were sown in the spring upon those parts where the grain was most liable to lodge; the amount of seed sown upon the whole was only two and a half bushels, and the yield had been two hundred stooks of sheaves—then not thrashed, so that I have no other data for estimating the product obtained. After the wheat a rape crop for spring feeding would be likely to follow, and then oats, perhaps followed by wheat again, and then roots or beans. This would be a rotation of six or seven years, but it is not adhered to with any particular care. Wheat which was to be used for seed, Mr. H. did not house as soon as the rest, in order to allow it to dry and mature more thoroughly.

The particular interest of the place centers more in its live stock and grass fields than in its crops, however, and of these we will begin with the sheep, so as to defer the cattle and dairy matters for our conclusion. Mr. H. generally pays in the vicinity of 45s. sterling, say $11.25 per head for ewes in October, to the number of sixty or thereabouts. Fifty-nine of the number purchased in the autumn of 1858, had brought him the 106 lambs he had to dispose of in 1859. They come mostly from the north, and are probably a cross of the Cheviot male upon Leicester ewes. He made a bargain with the butcher for his lambs this year in one lot at 24s. ($6 each) fatted, a few beginning to go off as early as May, when only four to six weeks old, and the purchaser being allowed in the bargain to draw from the number according to his wants—the whole to be taken before the end of July. What were left on hand at the end of June were at that time weaned. The ewes themselves are fattened, and sold along during August, September, and October,—fetching from $12 to $12.50 per head; so that the sheep account shows, for not quite a year's keeping of each ewe, (1.) a profit of from 75 cents to $1.25 in the difference between the price paid for her and the price received, (2.) the fleece sheared from her in the spring, which is quite an item—and (3.) the lambs which she has produced and reared—a return which it requires no argument and little arithmetic to show must be considerably beyond the labor of caring for her, and the cost of what she has eaten.

Turning now to the cattle, we find that Mr. Horsfall buys the bullocks he fattens in April or May, grazes them through the summer, finishes them up in the stables, and sells in November; milch kine being found to pay better for winter care. It is the custom, Mr. H. remarked, with the London dairymen to buy in fresh cows as fast as others run dry and are sold, or whenever they need to increase the quantity of milk for sale. It is his system, as I remember what he told me, to keep about twenty cows constantly in milk. He generally buys about the time the first or second calf comes in; but if he finds the right sort of animal, say at three, or still more frequently at four years old, he did not seem so particular as to the season of the year in which she came in his way; milking them for two or three years—the latter period only when the cow's extraordinarily good milking qualities seem to justify it. They go dry from two to three months in the year, and by a little skill in selection, they average about twenty quarts per day when fresh. Mr. H. appeared, like some of our best dairy farmers, to prefer a cross-breed to a pure; he said that what he always chose when possible, was a kind of cow half Short-Horn and half Highland Scots, of which sort, in that part of Yorkshire, there are generally some to be found. As an illustration of the value of such cows as he would select in that part of England, I may mention that the week previously he had purchased three head of these Yorkshire Short-Horns, for £45—say $75 a piece.

These milking cows he keeps constantly in good order, and maintains that much of his success in milk-producing has been due to this fact—that it must indeed be ranked as one "*leading feature of his practice.*" Accordingly, when the cow runs dry in her sixth year, she has been gradually getting fatter and fatter for some time back, and a month's "finishing" in the stall is all that is necessary to make her the best of beef. He does not breed any to raise himself, but by this method, some farther particulars of which I am about to give, he accomplishes the double object, as one might almost say, of getting both the milkman's and the stall-feeder's profit out of the same animal.

As we go out now to look over the pasture and meadow lands, we shall obtain a little insight into Mr. Horsfall's out-door management, and then an examination of his stables will lead to that part of his in-door operations connected with feeding, while a subsequent glimpse of his dairy will enlighten us as to the final manipulation of what it is the business of the rest of the establishment to produce.

We saw fourteen acres of meadow, then, which carry about twenty cows and twenty-four sheep, from the time the grass is well up until the middle of October, with very little assistance from other sources. Another lot of twenty acres, every yard and foot of which is such that the cattle are fond of it, has usually supported, Mr. Horsfall told me, a bullock and one and a half head of sheep with their lambs, to each acre. To these pastures the cattle and sheep are generally admitted about May 16th, previous to that time grazing upon the hay or meadow land, and thus allowing the pastures to have a good start,—the best possible security, Mr. H. thinks, against injury by subsequent drouth. The meadow is thus eaten close early in the season, but by the end of June will cut two and a half tons of hay per acre, and generally yields, also, a second crop and an aftermath. From this twelve acres of meadow I saw a fine stack, and I have not before referred, I think, to that peculiarity of English farming which every traveler notices at once—the stacking up of the grain and grass, so that these beautifully constructed and beautifully thatched evidences of plenty and skill, form a most prominent feature about every farmstead—a stack cut this season from the field referred to, measuring thirty-three feet in length, twenty in breadth, and fourteen in height, and supposed to contain at least thirty tons. Mr. H. estimated the weight of ordinary hay at sixteen stone (14 lbs. each, I suppose,) per cubic yard, or 224 lbs.; but his early cut hay he said, was exceedingly compact in the stack, so closely packed, indeed, that he had repeatedly found it by actual trial to weigh 28 stone per cubic yard, or 392 lbs. This is remarkably heavy. He finds great advantage, he thinks, in early cutting, never letting the grass get into full flower.

The best pasture is a deep alluvial loam, but the meadow, which is irrigated, is naturally a thin soil and a strong clay. The irrigation comes from a little brook into which the sewage of the village of Burley flows, and is simply performed by being admitted at the highest point, a gentle knoll, whence furrows having a very gradual descent, carry it over the whole, the water when turned on trickling out from these channels through the grass. It is allowed to run through the winter until March, when, as I have already mentioned, the meadow is grazed until May, and then another irrigation ensues to give a start to the hay crop, and after mowing a third flowing takes place.

I stated the number of animals kept per acre on the pastures, with the qualification of "some little assistance from other sources." This assistance only consists I think in a little cooked food for the milch cows, and in the fact that when the pasturage begins to be less hearty, say at just about the time of my visit in the middle of August, they are stabled at night, and receive a little grass in the stall. This grass is often obtained from the same pasture with a scythe, for, at intervals, where the droppings of the animals have laid, the herbage will not have been eaten off, and a man can soon cut enough of the rank growth thus produced to serve for the housed stock, and if not wanted for the cattle, it is cut just the same and given to the horses. In this way not only the whole growth of the field is completely economized, but the grass itself is kept in better growing order, as well as in better appearance. In hot weather Mr. H. is in the habit of stabling his animals in the day and letting them out at night. All the grass land is also subject to farther manurings, of which we shall speak in connection with the stables and their management.

Of the grasses Mr. Horsfall likes best the *poas* and the *festucas*, the former genus comprising a number of varieties, among which what is there called meadow grass (*poa pratensis*) is perhaps the best known, and the latter class or *fescues* being generally regarded, I think, as peculiarly suitable for low lying grounds. For under grasses, as he calls them, and clovers, he don't care so much. His lands are all drained, the lines of pipe tile running eight yards apart, and from three to four feet deep, the latter depth being found preferable, and having been employed in the drains most recently put down.

Mr. Horsfall's simplest feeding stable was an inexpensive building, of which I had the curiosity to take the exact measurement, as he seemed to like the plan on which it was put up quite as well as any other, and as its cheapness, moreover, is such as to put it within the means of any American farmer. The inside length was forty-two feet four inches—outside width fourteen feet ten and a half inches. The back wall was of brick, seven feet three inches high, the end walls also of brick with doors. The front of the building toward which the roof sloped, was probably about six feet high; it was composed of six pairs of doors, so that this whole side could be thrown open if necessary. The roof was of slate and *thatched underneath*, a very simple and not uncommon English method, worthy of adoption here, of maintaining a more even temperature, by keeping out extremes of heat and cold—the spaces between the roof timbers being filled in with straw, held in place by light strips nailed across, or in some other similarly cheap and easy way. In speaking of slate roofs, I think it is Mr. Mechi who recommends whitewashing them; because, as he states, the rains of summer will not carry it off, and the sun's heat is then reflected, while the snow and frost of winter will at once remove it, and then what heat the sun gives will be absorbed.

A wing attached to this building contains feed and a well sheltered apartment for roots; while the water from the roof is collected in a tank, from which a tap may be added to carry it by one turn of a spiggot into each stall. I have forgotten whether the last arrangement was already in operation, or whether it was spoken of as an improvement to be made. One improvement was suggested as worthy of attention in erecting such a stable, viz: The provision of slides in the doors for better ventilation, or what was thought perhaps preferable, the hanging of the doors in two parts, so that either top or bottom alone might be opened or shut at pleasure.

Coming now to the interior arrangement, we find that a little greater width would allow an alley way for feeding—which runs along the back wall, and toward which the heads of the animals stand—a little wider and more "handy"—its width now being only about thirty inches. The building accommodated eleven or twelve stalls—their width being three feet six inches, to three feet nine inches. The manger bottom is only two or three inches above the level of the floor. Its inside width at bottom is fourteen inches; the inside board is nine inches wide, sloping outwards, and the back of the manger one foot eleven inches high, also with a slight slope, so that its inside width at top is fifteen and a half inches. In front of the stall a timber runs three feet and eight inches high from the manger bottom—say four feet two inches outside height from the ground. This would leave an aperture of about twenty inches from the back of the manger to this piece of scantling—eight inches of which is filled by a board hung upon hinges to the latter, so that when feed is put in from the alley way it opens back for its admission, while the cattle cannot push it outwards so as to put their heads through.

The stall partitions are about five feet wide from the extreme front; the cattle are fastened by a chain about the neck, attached to a ring sliding up and down upon a stanchion about a foot back from the manger in the side of the stall. The floor of the stall is worthy of particular description. A piece of cocoa nut matting three feet square occupies the upper end, having straw under it, and securely fastened down. Back of this there are grates opening into a tank beneath, not quite three feet deep, two feet eight inches wide, running the whole length of the stable. The grates are of the same width as the tank, each one three feet three inches long, fitting neatly together, and with the rest of the floor, and capable of removal one by one for any temporary purpose. The frame is made of three by three inch timber, with slats four inches wide, and one and a half inches thick, and two and a half inch spaces between the slats. The distance from the manger to the outer edge of these grates is seven feet eight inches.

Of the underground tank there are six extensions, answering as outlets, one at the end of the building, and the other five along the side, the outlets enabling a man to work at any part of the tank in removing the manure more conveniently than could otherwise be done, and to some extent entirely upon the outside—a cart backed up to where he is at work and no doors being open to chill the animals. There is a pump to take as much of the liquid as can thus be drawn off. No bedding beyond the mat is used for the cattle. The more solid parts of the manure are taken away in carts and sometimes mixed, especially if they are not to be immediately applied, with the scrapings from the adjacent public road or the cleanings of the ditches. But it is to the application of this substance to his grass lands, almost without stint, that Mr. H. owes their unflagging, or rather, I may truly say, their constantly increasing productiveness. A dozen good loads spread upon an acre just before a gentle shower, will be washed into the ground like a healing ointment, there being no straw or other coarse material in the way. The time for manuring the meadows is as soon after the mowing as the weather suits; for the pastures, during the winter. The liquid manure is often mixed with the rest for application in this mode; it is also pumped into barrels and put over the pasture in spots where the cattle do not appear to like the grass so well, or where it is coarse and wiry, or on spots a little bare; and three or four doses of this kind in winter or spring, are said to bring on the herbage wonderfully, and indeed seem to change its nature at once. If there is an extra supply of the liquid manure, it may be carried to the source from which the water used for irrigation is distributed, and poured in there to render it still more fruitful of good as it is diffused over the field through the diverging channels already described. In what I have just said about the tank, I omitted to mention that it contained a partition having interstices between the boards just so as to let the liquid part through into a little compartment with which the pump connects, and retain the more solid mass behind. Mr. Horsfall estimates the annual production of manure from cattle, if it is well preserved, as worth at least £5 per head.

Dr. Voelcker had then just published in the Royal Ag. Society's Journal an Essay on Liquid Manure, which, as I subsequently read it after visiting the Cirencester school, appeared to me eminently practical, sound in its general reasoning, and cautious in its conclusions. But Mr. Horsfall thought it calculated to impede rather than increase the use of liquid manure, because Dr. V. classes "soils containing a fair proportion of clay, especially stiff clay soils," among those not benefitted by its application, thus running exactly in the teeth of the long continued and successful practice at Burley Hall. Dr. V. also advocates the dilution of the liquid, a thing that Mr. Horsfall never does—drawing his argument too exclusively as the latter thought, from the Flemish farmers on the sandy soils of Belgium. It is undoubtedly true that to use liquid manure to advantage upon stiff and retentive ground, the land must be well drained and in good order; and, of course, with these prerequisites, Mr. H. considered its application more effective there than anywhere else. He would not apply it in very hot weather, of course; preferring a murky if not absolutely a rainy day, and thought that any previous dilution would then be attended with evil instead of good results. It seems quite possible, however, that upon drier and lighter soils, or in a climate less moist, the reverse should be the case, as Dr. Voelcker argues.

For steaming the food the cattle get, Mr. Horsfall employs cans made of block tin holding three bushels each, which last in use about two years, and are portable and easily handled. His apparatus accommodates three such cans, which are filled three times a day for the twenty milch cows he keeps in winter—the mixture steamed being composed at the time of my visit in the following proportions, the quantity mentioned being that prepared for each cow's daily subsistence:

Rape cake,	5 lbs.	Malt combs,	2½ lbs.
Bran,	1½ "	Indian meal,	1 "
Straw cut to half-inch length,	10 to 12 lbs.		

This mixture is just dampened—the degree of moisture it contains being a very important matter, and one which experience must determine—the food having a greater or less laxative effect, according as the water in it is increased or diminished. Cotton cake Mr. Horsfall has also employed to good advantage, and Indian meal he considers the most fattening food he can get, if it is properly mixed with other substances—indeed the composition of the feed given in winter, unless I am mistaken, would vary from the above by the substitution in it of three or four pounds of Indian corn instead of one. The steam is admitted to this mass for about an hour, and there is really something quite attractive in the odor it exhales—an effect which must be increased in a cold day by its warmth. Mr. Horsfall modifies his feeding materials of course with changes of price at different times. He has in past years used a great deal of bean meal to good advantage, but at present it is too dear for the purpose, and wheat bran and other substitutes are cheaper, as will be perceived from the fact that while wheat has heretofore averaged 56 shillings, and beans 34 shillings per quarter—that is, wheat at $1.75, and beans at $1.06 per bushel, the former was selling last year at $1.25 per bushel, and the latter at $1.56. The cooking of the feed he estimates to cost for fuel, only two pence (four cents) per cow per week, while with but little additional assistance in preparing the food and in milking, one man has the entire charge of the twenty cows. The advantage of feeding straw, in Mr. Horsfall's view, consists in the fact that you thus utilize as fattening agents those elements in it, which would escape by fermentation, if it were converted into an ordinary dung heap, while the very ones which alone render it of service as a fertilizer, are those of which the animal economy can make no use, and which are therefore thrown off by it, and collected in his tanks for the same destination they would otherwise have taken, but performing a double office when they reach it.

The price at which the milk is sold from this establishment is four cents a quart; but there not being sufficient demand to consume it all in this way, what is unsold is made into butter, perhaps to the amount of fifty pounds per week. There is an old well at the very door of the dairy room, employed for the sole purpose, as there are waterworks which supply all that is used, of cooling the cream in hot weather, before churning—a can containing it being let down twenty-six feet the night beforehand, where the temperature stands at about 46 degrees. The dairy room is purposely a small one, as the temperature there can thus be much more easily regulated; and upon maintaining it properly, much of his success in butter making is believed to depend. There are several tiers of shelving around the room, hollow, several inches deep, and lined with sheet lead. A current of water, cold in summer and hot in winter, is kept in constant circulation from one to another, and Mr. H. finds that he can thus keep the thermometers that hang at one or two different points in the apartment, at from fifty-two degrees to fifty-six degrees with great equability. The upper shelf about the room was covered with an inch or two deep of charcoal, which had been found to operate most successfully in the preservation of an atmosphere constantly sweet and pure, without such an admission of the exterior air for purposes of ventilation as would be necessary without this precaution. Unless I have forgotten, however, the sides of the room near the top were also provided with one or two outlets for the escape of any foul air that may rise from below.

I was particularly interested in what I saw and learned at Mr. Horsfall's, because it showed so plainly the practical nature of the experiments he has undertaken, and because the numerous details with which it furnished me, become of double value in connection with his writings, already to some extent known in this country, from abstracts prepared for the COUNTRY GENTLEMAN at the time of their appearance in the Royal Ag. Society's Journal, and from their partial republication in our State Society's Transactions. There is one point in these Experiments to which I wish to refer more particularly, as it came up for casual discussion not many months ago in the columns of this paper (Mar. 22—vol. xv, p. 192.)

Mr. Horsfall justly considered it of great importance to the practical farmer and dairyman that he should know more accurately the relative values of the different materials he feeds, in the vital economy of the animal consuming them. For the purpose of conducting investigations that should throw any real light upon the subject, he thought, moreover, that the investigation should go beyond his laboratory and analyses, to try the animal and its food upon the scales, and carefully reduce the results of the facts thus obtained and of the reasoning by which they were connected, into intelligible form for application to practical objects. To take the article of *wheat straw* for instance, he finds that chemistry can obtain out of a hundred pounds of it only half a pound of oil, while in the nutritive processes that go on in the stomach of the animal, the far larger quantity (32 lbs.) of sugar and starch it contains, seem to be also made available in the production of fat. In what degree they possess an efficacy of this kind had long been a matter of controversy, and its very truth he considered no more than "barely settled." He therefore applied himself to its farther elucidation by experimenting upon it himself and studying the experiments of others. By a course of careful experiment which I have not room to describe at length, of which the subjects were six cows, it became plainly apparent that "the oil in their food was inadequate to the supply of the butter and fat" produced from them, some portion of which therefore must have been derived from the starch, sugar, &c. of their food.

Going back, then, to the oxygen, carbon and hydrogen which make up, in different proportions, starch and sugar, as well as fat,—calculating the amounts thrown off in different ways by the animal economy, consumed in the process of respiration, &c., together with what is retained in the form of increased weight, he was led irresistibly to the conclusion that in supplying this demand, the starch and sugar of the food occupy a rank equivalent to a certain smaller weight of oil, and he thought himself fully justified in assuming that the one, (the starch, sugar, &c.,) would go about five-ninths as far as an equal amount of the other, (the oil)—in other words, that the proportion of 90 to 50 expresses the ratio between the respective values of these constituents in the food. Adopting this proportion, he then constructed a table for the purposes of comparison between different feeding substances, computing the cost of the meat that would be obtained from 100 lbs. of each. To go back again to the straw, he puts it down as containing one-half of 1 per cent. of oil, and 32 per cent. of starch, sugar, &c.—both together equivalent to an aggregate, according to the above estimate, of 18¼ lbs. of oil in 100 lbs. of straw. In conversation with Mr. Horsfall during my visit, he said, however, that subsequent experiments, conducted (I think) by Mr. LAWES, had led him to modify somewhat the foregoing computation, and to consider the ratio of *two to five* as expressing more nearly than that of 50 to 90, the approximate efficacy of starch, sugar, &c., as an equivalent for oil—an abatement upon his former estimate, explained by supposing that some oxygen combines in the process of digestion with the carbon of the food to form carbonic acid gas, and is thus thrown off, creating a loss not previously taken into the account. While this does not affect materially the results of the previous experiments, it should be placed on record and borne in mind in consulting them.

With one farther remark I shall conclude. Mr. Mechi, who had found straw as he cooked it with other materials, apparently of unexpected service, for its price, for feeding purposes,—immediately seized upon Mr. Horsfall's reasoning as both explaining his own experience and sustaining his advocacy of the more economical employment of their straw by English farmers. He mentioned in a paper publicly read, that he was getting 18 lbs. of oil out of every cwt. of straw that he fed, or something to that effect—a statement which, when put into this form *by him*, was at once discussed and disputed. Finally, in December last, Mr. Nesbit the chemist, came out with a total denial of the correctness of any such assumption as that on which Mr. M.'s statement was based, with regard to the equivalent in oil of "the carbon, oxygen and hydrogen in straw." This denial, although unsupported by any argument, and apparently founded on no experimental acquaintance with the subject in its practical bearings, nevertheless furnished several writers in Great Britain and in this country, with a new opportunity of decrying Mr. Mechi's pretensions to "practical experience," and of sneering at those who had been so gullible as to receive anything coming from him as "reliable." If the pains had been taken to go behind Mr. Mechi, and examine his authorities, the error, if error there was, would have been elsewhere located, or, very possibly, a negative assertion, without farther explanation or reasoning, would not have been so readily pounced upon and brought into notice, without any reference to the laborious, careful, and I think I shall be fully justified in adding, the very reliable investigations which were thus abruptly contravened, and for which we have to thank Mr. Horsfall—of whose "practice" as well as "preaching," I much regret that I cannot present a still more complete and satisfactory account.

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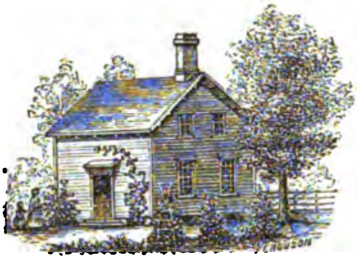
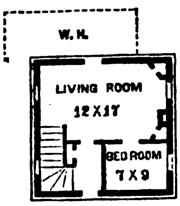


DESIGN FOR A LABORER'S COTTAGE.

This is a small but complete cottage of its kind. It has a front entry as a protection from cold-winds, and for proper seclusion; a small closet on the left of this entry; a bed-room and living-room, the latter with two closets; and a wood-house in the rear, which may be built with the house or added afterwards. A portion of this wood-house may be fitted up as a sort of summer kitchen, to which the cooking stove may be removed during dog-days. The cellar beneath is reached by a flight of stairs from the living-room, under the entry stairs. The bed-room on the principal floor may open into the entry, if desired; but it will be more comfortable in cold weather if immediately connected with the living room and receiving of its warmth. The stairs to the chamber, land under the highest part of the roof, consequently there is no danger of striking one's head against the rafters. There are two rooms and a spacious closet above.



There being no windows on the side of the entrance, it is intended that this side be mostly covered with prairie roses or other running plants, kept several inches or a foot from the outside boards, by means of a frame or lattice-work trellis, made for their support.

This cottage is nearly square, or 18 by 20 feet outside, affording an economical enclosure of space; and the roof, having considerable ascent, furnishes plenty of chamber room. The ceiling is 7½ feet high, and the eaves about 8 feet above it. It may be built with a cellar under the whole, and with a rough board wood-house for about three hundred dollars.

It should be observed that the window-hoods should not be made of inch boards as is sometimes done, which gives them a flimsy appearance, but of plank at least two inches thick, and better if three inches.

The foregoing is one of several Original Designs prepared for the coming Number of the Illustrated Annual Register of Rural Affairs for 1861.

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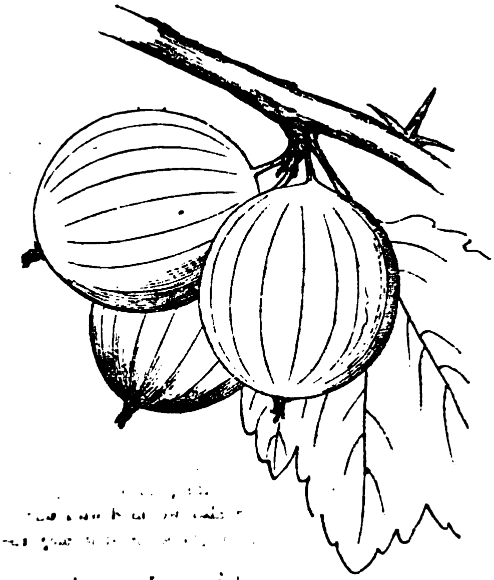
Good Sheep.—Mr. Wm. Vernon of Scaghticoke, has 18 pure superior wooled Cotswold ewes, which have produced this season 27 lambs. They were dropped late in March, and now average 105 pounds each.

[For the Cultivator and Country Gentleman.]

MOUNTAIN SEEDLING GOOSEBERRY.

I enclose an outline of the Mountain Seedling, a variety which I received from a Shaker settlement in eastern New-York. This is quite distinct from the American Seedling of the Cincinnati gardens. I have had it bearing three years, and am highly pleased with it. The plant is of a robust habit, often growing five to six feet high: branches upright and strong; leaves deep glossy green, and very large; the berries grow in clusters of three or four, and will average nearly as large as the outline under ordinary treatment; color of berry, dull red; quality equal to Houghton. The plant is very productive, *and never mildews*. It is undoubtedly a native, of the same type as Houghton, and more valuable than that fine sort, on account of its fine size and the more vigorous and upright character of the plant. E. Y. Teas. *Richmond, Ind.*



Mountain Seedling Gooseberry.

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THE HARVEST RETURNS ABROAD.

The Agricultural Gazette (London) of the 18th of Aug. contains its annual Harvest Report. As to the Wheat crop, out "of 140 reports received from as many correspondents in England and Scotland, no fewer than 93 declared the crop to be below an average; and if the chief wheat-growing districts be selected it will be found that the proportion of unfavorable returns is quite as large." The same journal of the 25th contains a supplementary report, upon which the following editorial comments are given:

> The additional harvest returns in another page corroborate those which were published last week. Of 30 reports of the wheat crop in Scotland and England, 19 estimate it as under average. Of 33 reports of the barley crop, 23 declare it to be average, and seven put it as very good or over average. Of 32 reports of oats, four are under average, 22 are average, and six are over average. Both peas and beans in these supplementary returns are generally reported as being superior crops.
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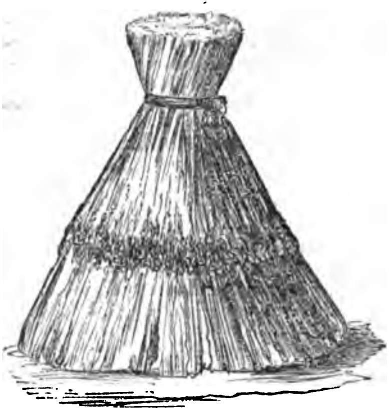
> The weather which has befallen us since the date of these returns must, however, be remembered by any one who would derive from them his opinion of the present harvest. In several instances, as from Suffolk, Essex, Cambridgeshire, and elsewhere, we have had intimation of the serious injury done; and though a few only of our correspondents have sent to correct their reports, both of the probable harvest time and of the probable yield, yet everywhere we know the ripening of the

grain is being delayed, and both its quality and its quantity are being injured by the constant cold and wet.

This weather, too, is general; the Times reports it to be as mischievous in France, in Holland, in Holstein, and in Germany as it is in England. In districts earlier than our own the question is—how is the harvest to be got in if we are to have a continual alteration of rain and sunshine.

"The wheat in the districts to the south-east of Paris, where the crop has been gathered in, is more or less injured by the damp, and the new wheat offered for sale in those markets is unfit for millers' use. The wheat in the northern and western departments of France, where the harvest is being commenced, will be more or less injured should the weather not change for the better. Even in the south of France it has been found difficult to thresh out the corn. The rain penetrated the stacks, which were not made for such unseasonable weather, and the new wheat brought to market is unfit for storing. It will be long before the wheat now being reaped will be sufficiently dry. The accounts from Germany are not more satisfactory. It rains in Holland, it rains in Holstein, and the wheat harvest is retarded. Rye and barley have suffered. Accounts from Berlin state that the potato crop is diseased, and that the rye and barley on the ground are in danger of perishing."

In addition to the foregoing we have the *Journal d'Agriculture Pratique* (Paris, August 20) from which we translate for the COUNTRY GENTLEMAN M. BARRAL'S leading paragraph:—"The agricultural fortnight," he remarks in effect, "may be announced in a general lamentation, making itself heard from North to South. Here they fear for the Vintage, there for the Harvest. Grapes threaten to remain green—at least those that are not eaten up with the oidium—in either case producing only a wine of pitiable quality. As to the grain, no one ventures to cut it. In Beauce," a fertile district forming parts of the departments of *Loir-et-Cher* and *Eure-et-Loir*, "three-quarters and a half are still standing as we write, and the abundant rains prevent their going rashly to work. Besides the crop has not come to maturity throughout the whole north, and they can only proceed to the harvest on condition of hurrying to put the sheaves in stooks protected by cap-sheaves to shed the rain" [*en moyettes recouvertes de chaperons.*]



THE FRENCH "MOYETTE."

This is a way of putting up the grain worth a passing description. While a workman holds a small sheaf on end, which he compresses closely at the top with his two hands, others bring more small ones, in quantity equivalent to six or seven of the ordinary size, and put them around the central one, so as to form a smooth cone with a large base, which is then bound with straw about two-thirds the way up, so that the wind may not derange it. Then a cap-sheaf of the ordinary size, bound near the bottom, is *inverted*, so to say, over the apex of the cone, by opening the heads of the straw for its admission and spreading them smoothly around, so that the whole presents the appearance shown in the engraving, which we copy from *Le Bon Fermier*—where it is stated that grain may stand thus, to ripen, for from two to three weeks before carrying it in.

"This method of *moyettes* or *villottes*," M. Barral goes on to say, in the article from which we are quoting, "recommended first by de Vaux in 1822, then by de Dombasle, de Gasparin, and many other agriculturists, is gaining ground every day—especially in these seasons of bad weather. Thanks to the good counsels of science now more widely received, we have no longer to dread such disasters as history has sometimes recorded. Many old cultivators who compare the present season with the worst they have ever gone through before, are speaking of the rains of 1816, when everything was totally lost, and the grain rotted on the ground. Nothing like this, fortunately, is now to be apprehended."

[For the Country Gentleman and Cultivator.]

Dry Yeast—Bread and Biscuit.

On page 31 of the current vol. Co. Gent. are very plain directions for making dry yeast, and on page 79 are a few amendments to them. These directions meet the approval of my wife, who is an excellent bread baker; they are the same as those by which she makes her dry yeast. She puts a few of these cakes to soak in a half pint of warm water in the evening, letting them soak until the next evening. She then sets her rising by boiling and mashing fine two quarts of potatoes; to these she adds water sufficient for the rising, about milk warm, and a tablespoonful of salt; then stirs in her flour and yeast until a proper consistency; she then sets away to rise until morning; then she adds flour to the rising, kneads it well and sets it away to rise; after rising, she moulds it into loaves and sets it to rise a short time again, then bakes. During the summer she, instead of boiling potatoes, boils thick sour milk; she takes the whey which separates and sets her rising as above. When her yeast cakes are new she puts them to soak in the morning previous to setting her rising. Her mode of making light cake or biscuit is as follows: When her bread is ready to mould up she takes a large bowl full of the dough, a teacupful each of sugar and butter, grates in half a nutmeg, kneads them together, makes them into balls or loaves about an inch and a half in diameter, puts them in a tin, lets them rise, and bakes. It is surprising how little attention many farmer's wives pay to making light sweet bread, one of the most important parts of the meal, always having hard, heavy, sour bread, with butter to match, requiring a sharp appetite to make them go down. J. W. L.

[For the Country Gentleman and Cultivator.]

Recipe for Elderberry Wine.

To 1 gallon of berries put 1 gallon of water—boil it until the berries burst—strain them, and to every gallon of this juice add 3 pounds of moist sugar, 1 ounce of ginger, "cloves and cinnamon," of these two last enough to suit the taste. Let it stay in the cask until March. RUSTICUS.

MESSRS. LUTHER TUCKER & SON—In your last CULTIVATOR a request was made for a recipe to make good elderberry wine, and having one that has been tried for years, I will give it to you for the benefit of your readers.

Gather the elderberries when perfectly ripe, pick them off the stems and put them in an earthen vessel; to every quart of berries add one quart of cold water, and let them stand until they crack open. Then squeeze them through a flannel cloth. Then strain the wine through another flannel cloth, and boil it in a clean brass or copper kettle from one to two hours, and to every gallon and a half, add one tablespoonful each of ginger, cloves and allspice, put in a bag and put in the wine while boiling. Then empty it in an earthen vessel, and add to every gallon and a half 4 pounds of brown sugar. Then add to every gallon and a half from 2 to 3 tablespoonfuls of good hop yeast, and let it stand until it ferments and settles. Then bottle it up and set it away from six to eight months, and it will be ready for use, and you will pronounce it the best you ever tasted. It is excellent for medical use. D. M. FOULKS.

[For the Country Gentleman and Cultivator.]

HOW TO DESTROY VERMIN ON STOCK.

Messrs. Editors—The inquiry of one of your correspondents in the Country Gentleman, of how he shall rid his calves of lice, is one of considerable importance to *both parties* concerned—first to the animals in point of *comfort*, and also to the owner of them in the economy of it. All animals infested with lice, are in a state of continual irritation and discomfort, and as a general thing do not thrive and grow as they otherwise would, and this subtracts so much of the profits from the pockets of the owner. The motives of humanity to the animal, and economy to the owner, ought to induce every owner of domestic animals to keep them free from all species of vermin. It is well known that the vegetable and animal kingdoms are both infested with various kinds of parasites, which draw their nourishment from the object on which they are found, and also that these animals and vegetables are injured in proportion to the number of vermin found on them, or the amount of nutriment drawn from them. Whether this argument is sufficient to establish the theory that "it is natural for calves to have lice," or not, I shall not attempt to decide; but my belief is, that it is just as natural for children to have lice as it is for calves, and that there is no more need of having them in the one case than the other; and further, that no person can be justified in allowing any living being in their possession, to be infested with vermin any longer than they can effectually remove them.

It would seem that at the present day no one need be ignorant of remedies for killing lice, but from the numerous inquiries which are made from time to time, I think that the publishers of every agricultural paper would confer a great benefit on the farmers of the country, if they would annually at the commencement of winter, deliver an address to their readers on "vermin which infest domestic animals, and the effectual destruction of them."

In my intercourse with farmers for the past thirty years, I have heard of a multitude of ways to kill lice on cattle, and have tried a large number on my own cattle, but for some years past I have confined myself exclusively to one article for that purpose, and that article is *tobacco*, either in the form of *smoke* or *snuff*. My reasons for preferring it is, that it is easily applied, is safe in its application, and sure in its execution. From long experience, I know that tobacco smoke will kill any live louse, tick, or bed-bug that comes in contact with it, and it can be applied in all places with little trouble, either to man or beast.

To apply the smoke, I use what is called a *blow-pipe*, made of copper, about 3½ inches long and 2 in diameter. One end of the pipe is made tight, the other is made in the form of a lid or cover, to take off. In the top of the lid a tube is inserted; this tube should be two inches long, made a little flaring from the lid, and large enough to receive tthe nose of a hand bellows. In the bottom of the pipe another hole should be made, and a tube two inches long inserted. This tube should be half an inch in diameter at its junction with the pipe, and taper to a point of not more than one-eighth of an inch at the other end. A thin piece of copper full of small holes is fitted to the inside of the pipe; this should be a little less in diameter than the pipe. This strainer is placed in the inside of the pipe at the bottom to prevent the tube being stopped with the tobacco, and should be loose, so that it can be taken out and cleaned occasionally. The lower end of the pipe and the strainer should be made a little oval, and when they are used should be placed with their concave sides together.

When I wish to use the pipe, I put into it as much tobacco as I wish to use, then put in a few coals of fire, put on the lid and insert the nose of the bellows in the lid and commence blowing moderately; as soon as the tobacco begins to burn the smoke will issue at the opposite end of the pipe in a rapid stream. The nose of the bellows should be wound with tow, or a rag, so that it will fit tight in the tube of the pipe. When I wish to smoke cattle or horses, I take them when their hair is dry, and put them in a stable, or some place out of the wind, and having the pipe burning, place the little end in the hair, and continue to smoke and move the pipe until the whole animal has been smoked over. The smoke will not kill the eggs of lice, therefore the animal should be smoked two or three times, at intervals of several days between the operation.

Any cheap kind of tobacco will answer for this purpose, and one pipe full of tobacco will smoke four calves.

To smoke bed bugs, remove all the clothing from the bedsteads, and blow the smoke into all the joints, cracks, holes where the cords go, or any other place where a bug can get. In this way I have rid my premises of them, and a bug has not been seen or *felt* in my house for years.

In using snuff for lice, I have it dry, and rub it into the hair on the back, neck, brisket, and the inside of the thighs of the animal, these being the parts on which the lice are first and mostly found. If this is applied when they first get on the animal, one good snuffing will generally finish them. But whether I use smoke or snuff, I make it a practice to examine my stock often, and on the first appearance of lice on them, the remedy is applied, until a cure is effected. This rule ought to be *invariably* adopted by every one who has the care of domestic stock; for the reason that the longer it is neglected, the more suffering is experienced by the animal and loss to the owner. Many farmers in this vicinity have lately adopted the practice of feeding *sulphur* to their stock during the winter, as it is said that lice will not live on cattle, or ticks on sheep, that are fed with it, and the sulphur is recommended as being beneficial to the health of stock. The manner of feeding it is to mix it with the salt that is given to them. Some persons are in the habit of sprinkling dry ashes, or slacked lime, on the floors of the stables in which the cattle are tied; others put ashes on the cattle; but this is an unsafe way, for if the cattle get wet after the ashes are put on them, the lye will take the hair off, and in some cases the hide too. The first time that I heard ashes recommended for killing lice, I tried it on four calves. I put a small quantity on ther backs, and rubbed it well into the hair. This was in the winter. Before spring the hair on which the ashes had been put would pull out by handfuls, as easy and as clean as though it had been scalded; and on the backs of three of them the hide came with the hair, in spots. On these places scars were formed, on which the hair never grew afterwards. Since then I have seen scars on the backs of other cattle, formed in the same way. There are many other remedies which are applied for the destruction of lice, which have the desired effect, if they are judiciously applied.

I am aware that the opinion is somewhat prevalent, that fat animals will not be infested with lice. This as a general rule may be the case; but it is not always so. I once killed a veal calf that was fat, that had more lice on it than any other calf that I ever owned; and I have frequently seen other fat cattle, both young and old, that had quite too many lice on them. I heard a farmer say the other day, that the best thing that he ever tried to keep lice off of his cattle, was to give them plenty of *Indian meal* to eat, and when he gave it to them they were never troubled with lice.

I have also heard the remark made, that cattle fed with oil meal would not have lice on them, and that sheep fed with it would not have ticks. Those who have had experience in feeding oil meal, will know whether this is the fact or not.

O. T. Alvord.

Wilmington, Vt.

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[For the Country Gentleman and Cultivator.]

Remedy for Garget or Bloody Milk.

Saltpetre (nitrate of potash,) given in doses of half an ounce every evening, or every other evening, according as the effect is visible on the animal. If it causes profuse staling, every other evening will be often enough to administer it. I have usually given it in a bran-mash, or any similar kind of food that the animal would take. Thrice I have completely cured the complaint in the course of ten days or a week.

Rustic.

[For the Country Gentleman and Cultivator.]

SUPERPHOSPHATE OF LIME.

In Co. Gent. of July 26th, E. E. W., of Concord, N. H., having, as he states, like a good many others, discovered that certain articles sold as superphosphates are very worthless affairs—a discovery which he might have made, without being at the expense of buying and trying certain "trashy mixtures," by the help of the complete exposure of them made by Prof. S. W. Johnson, as reported in Co. Gent. of Nov. 3, 1859,—and having resolved to be no longer humbugged, but to prepare a genuine article for himself, asks for information about the process of making a superphosphate. As no one has as yet volunteered to give any such information, I am induced to submit the following directions, which, being obtained from a collation of several of the same kind given at different times in a journal of high character—*The North British Agriculturist*—may be accepted as entirely trustworthy and sufficient.

Superphosphate of lime then, may be prepared from several substances, such as ground bones, bone-ash, ground coprolites, phosphatic guano, &c., or from a mixture of any of these. The first requisite for obtaining a good superphosphate is to obtain *good materials*, whichever of the above you may employ. Having obtained good materials, place them in a heap on a hard floor, or still better, in a wooden or stone vessel. A cask, barrel, or hogshead sawed into two halves, will furnish something generally suitable. To a given weight of bone ash, ground bones, or whatever material you use, add about one-fourth of its weight of hot water, or, still better, of urine or of soakings from a manure heap, and mix thoroughly until the whole mass becomes wet or damp. Use more water or liquid manure if the materials will absorb it. Shovel the whole mass into a conical heap, if on a floor, and if in a tub or wooden vessel, put it in some similar form, and cover up with old bags, sods, or anything that will make a close covering. In a few days the temperature of the heap will be so high that the naked hand cannot be inserted in it. When the heat has cooled down somewhat, turn the mass over, add more water, urine, or barn liquid, and cover up as before. When the mass again becomes hot, add from one-fourth to one-third of the weight of the bone dust, or other material used, of sulphuric acid, taking pains, by shovelling or stirring with a *wooden* shovel or pole, to bring the acid into contact with every portion of the mass. Stir the whole well together, after adding the last of the acid, which it is well to pour into or upon the mass in several portions rather than all at once. Finally, form the mass into a heap, and cover with a coating of sawdust, charcoal dust, dry muck, or any similar material. After the heap has laid undisturbed for several weeks in a dry place, it will have become mellow and dry enough for application, or if not quite dry can be made so by adding a little of any of the materials above recommended for covering the heap.

As the directions now given are probably more complete and embrace more minute details than any other which have ever been put upon record on the pages of the Co. Gent., and as they differ also from some which have been given to inquirers in other agricultural journals, it may be well to accompany them with a few explanatory remarks as to a few of the series of steps in the process.

First, then, it may be remarked that the wetting of the materials—bone dust, bone ash, or whatever they may be—with water or manurial liquid, is thought to be much preferable to the method usually recommended and followed, namely, diluting the acid with the water or liquid and adding both at once to the mass. Being softened by the liquid and by the heat of the fermentation which is set up, the materials are more readily acted upon by the acid when it is added. Then, too, the acid is more sure of being distributed pretty equally throughout the whole mass, and of acting upon the materials, as sulphuric acid has such a strong affinity for water that it rushes, as it were, into the pores of the bones in search of the liquid with which they have been saturated. The process of preparing bone dust for plant food is, indeed, by this saturating of it with liquid and partially fermenting it, half or nearly half way completed before the acid is added; so much so at least, that some who use bone manure largely carry the process of preparation no farther.

Whether the process of preparing bone-dust, &c., is that of fermentation only, as just noticed, or that of making a superphosphate, it should be commenced several weeks before the prepared article is wanted. That much time is necessary to carry the process to maturity, and to allow the mass to become dry enough for use, especially in the cases where acid has been used.

If a ton of bones were treated with the quantities of water and of acid above named, there would be as the result a ton and a half of superphosphate, which need not cost more than $45 or $50, or at the rate of $30 per ton for a *genuine* article.

Lastly, those who wish to experiment for themselves should use much care and caution in handling the acid, as it is sure to eat holes in the clothing if any drops of it should come in contact therewith. A. R. A.

A HINT FOR DAIRYMEN.

We often meet with notices of good cows, and a large dairy composed of such would prove highly profitable, but too often a few poor animals throw the balance on the wrong side. For instance, a farmer in Massachusetts, keeping ten cows, found they averaged 1600 quarts to the cow, but the five best averaged 2000 quarts, leaving 1200 quarts to each of the five poorer ones. The best cows gave a profit of $18 each—the poorer ones were kept at a loss of $14 each, thus destroying nearly the whole profit of the dairy. No man can afford to keep a poor cow at the expense of the better ones—he should rather fatten for beef, or give away, even, than to pursue such a course of dairying. Let every cow's value be tested, and those that do not come up to the point of profit should go to the shambles.

AN EXCELLENT CAKE.

A housekeeper, very successful in delicate dishes, has furnished for the Country Gentleman the following mode of making an excellent cake: Take one cup of butter and three of sugar, well rubbed together; then take five eggs which have been beaten very light, and stir them by successive portions into the above mixture, adding also four cups of flour and a cup of sweet milk. Add nutmeg and a wine glass of rose-water; and also add a teaspoon of solution of cream of tartar, and half a teaspoon of solution of soda. Baking about fifteen minutes in a moderately hot oven will be sufficient.

CHICKEN PIE.

From the same source, we have been furnished the following:—Take a pair of good young chickens, cut them in small pieces, adding a proper quantity of pepper and salt and small strips of salt pork, and put the whole into a saucepan and cover with water. Boil for half an hour, add flour and butter to thicken the gravy. Provide a large dish for baking it, served with paste; put the whole into the dish and cover again with a good rich paste, and bake the pie half an hour. It is best while fresh from the fire.

[For the Country Gentleman and Cultivator.]

Recipe for Making Elderberry Wine.

At the request of A. B. R., I give my plan of making Elderberry wine, of seven years experience. Gather the berries when fully ripe, bruise them fine, then strain them through a cloth; to one gallon of juice add two gallons of water. To each gallon add three pounds of maple or other brown sugar; mix well together. Then scald and skim. When nearly cold add about one gill of good yeast to a gallon. Let it stand two or three weeks in an open vessel—in stone jars, if convenient—till fermentation ceases. Then bung it up, or bottle it, as you please; age improves it. Geo. Cargill.

THE CROPS IN GREAT BRITAIN.

That there is something above and beyond Human Skill, in the ordering of those events which are constantly going on around us—whatever our occupation or purposes, and however well, as Human foresight goes, may be planned their development and results—is a truth of which the Farmer seldom needs to be reminded. He is already too apt, by far, to throw the responsibility of his mistakes upon the short comings of Nature—mindless of that general rule to which she furnishes so seldom an exception, that Providence is sure to help those who help themselves.

Such an exception is occasionally seen, however, as we began by remarking. Let the Farmer provide for all contingencies as carefully, and husband his resources as judiciously as he may—there will now and then come a season in which the hand of the most diligent maketh *not* rich, just as there will also come others when even the sluggard's granary is more than filled. If the latter appears to be nearly the case in many parts of this country, the present year, the gloom of the former threatens our brethren in Great Britain more and more seriously as the days and weeks go by; each arrival of new intelligence from across the Ocean, brings with it less of hope, and increases the probability that our harvests, far too large as they are for our own consumption, will not be unwelcome there, or unimportant to the welfare, and it may be to the continued existence, of the thousands who crowd the cities both in England and upon the Continent. It was the just remark of ARTHUR YOUNG half a century ago, that English farmers have learned "how to turn their climate to the best account;" but no drainage could carry off the waters that have been falling there through the present summer, no fertilizer stiffen the growing grain against its pelting storms, no artificial appliances pierce upward through the clouds and open a channel for those rays of light and heat, without the genial influence of which man can only sow the seed, and the seed can only germinate in vain.

The Summer of 1859, and in many of the English Counties, the two also which preceded it, were unusually dry. Streams and springs, represented as never before known to fail, were running low, or already exhausted, and still a fair return had been made to reward the exertions of the British Farmer. Now it seems almost as if the sky had only been accumulating its stores of moisture to shed them in 1860 in one continuous series of overwhelming Rains; "in place of the ready bountiful crop," says the Mark Lane Express, there lies

> a dank, tangled mass of what might be coarse, uncared for, reedy herbage—laid everywhere so flat, so hopelessly beaten down by the wind and the rain, that if it be corn in ear, it must surely rot or mildew as it lies, never to rise again to welcome the too tardy smile of the long-tarrying sun! And still the rain comes mercilessly down, only to flatten it yet more closely into the much sodden earth; while your neighbor bids you mark the hay that he knows has been out for three weeks or more, and that can now never be worth carting at all, save it be into the dung-yard. The short-horns turn their backs moodily to the driving rain; and the farmer on his shivering pony, with his coat collar turned up, holds an umbrella over his head with one hand, as he opens the gate with the other, for a score or two of hapless looking lambs. What a thorough air of despondency there is about the whole group, and how plainly the picture, in all its sad uniform association, speaks of that "hope deferred" which "maketh the heart sick!"

Although some of the Crop Reports in that Journal, from correspondents in various Counties, are of a little more cheerful cast, the editors remark that it is "hoping against hope" for them to draw conclusions on the whole different from their own impressions and experience, of which the above extract forms a sample. The Irish Ag. Review—*four days later*, (Aug. 17,) the latest of our Foreign Journals now at hand—has the following paragraph which we copy at length, and which must conclude our Notes at this time, only preceding it by the remark that if the prospect of a market for our superabundant products cannot but promise "easier times" here, and through the Great West where several seasons past have been anything but remunerative, we cannot but bear in mind with sympathy the blow that is falling elsewhere—a blow that must be felt all the more seriously by those whose heavier capital will thus be rendered wholly unproductive—who will have expended just as liberally for costly fertilizers, and to whom the Rent Day will come at the appointed time, just as relentlessly, whether the crop be large or small!

> Since 1847 the prospects of the country, in relation to the harvest, have not been gloomier. The sunless summer is being succeeded by a wet autumn. From England and the north of France, from Germany, Denmark, and Sweden, reports come in of inclement weather, with heavy rains, so that spring corn is being housed in bad condition, whilst the other crops are suffering and kept backward very much. Last night the rain descended in torrents, not only here but for many miles round the city. A considerable business in wheat to-day has been the result of this flood of waters from the unsettled elements, but some holders decline meantime to offer. We call the advance to-day over Tuesday's rates from 1s. to 2s. per barrel on foreign wheat. From intelligence by the wires from London, we learn that a large business is being transacted in rice at extreme rates, which have not transpired. This is a sure sign that there is much alarm in the metropolis as to the grain crops in England. The accounts from North Britain are more favorable; no complaints of oats, barley or beans, and very slight and partial as regards wheat. Turnips and potatoes are sound and abundant, and one intelligent correspondent expects the stack yards in Scotland to be nearly twice the size of last year's. With such prospects and the immense supplies of wheat and flour imported by the New York and Montreal firms into the Clyde at present, we need not be surprised to learn our Glasgow friends are shipping to England and Ireland this week. Amidst the gloom and darkness of these days, it is cheering to be informed that the crops of the United States and Canada are unusually abundant, as also in the south of France and north of Spain. From Santander, the principal shipping port of the latter, we may expect a good deal of flour direct into Dublin, and that ere long.

—Since the above was written, we have the Mark Lane Express of the 20th ult., the Crop Reports in which do not differ materially from the foregoing.

DEEPENING THE SOIL.

Our meditations this morning have had for their subject the oft-heard exhortation to the farmer, to "Deepen the Soil." Taking this for our text, we will give the reader "a homily" thereon—considering only the one side of the matter—the soils which are benefitted by cultivation of this character.

I. *The Benefits of Deepening the Soil.*—A modern writer remarks, and well remarks, that "a deep soil is better than a shallow one, because it furnishes a more extensive feeding ground for the roots of cultivated crops. The elements of nutrition, which the plant finds in the soil, are not all upon the surface. Many of them are washed down by the rains into the subsoil, and some are found in the decomposing rocks themselves. These, the plants, by a sort of instinct, search out and find, as well in the depth of the earth as at its surface, if no obstacle opposes."

II. *The Preliminaries to Deepening the Soil.*

1. It is useless to deepen the soil by culture farther than we first lower "the line of standing water"—the line where water ceases to drain or filtrate away but passes off, if it pass off at all, by the slow process of evaporation. It matters little what the soil is below this line, because, as the same writer's remark will illustrate, "no root, except those of aquatic plants, will grow in stagnant water. Every one who has attempted to grow deep-rooted vegetables upon half-drained swamp land, has observed the utter impossibility of inducing them to extend downward their usual length. Parsnips and carrots, on such land, frequently grow large at the top, but divide into numerous small fibres just below the surface and spread in all directions."

2. We need deepen the soil no lower than it is furnished with food for vegetable growth, either naturally or by application of fertilizing matters from other sources. Most soils only need loosening and deepening by culture so as to allow aerating influences to act, to become able to furnish nutriment to the roots of plants. But we cannot dwell on this question here.

III. *The Methods of Deepening the Soil. How can the work be accomplished?*

1. We may deepen the soil by thoroughly underdrain-

ing it. With no further working, save the operation of continued drainage, it will in time become deep and mellow. It does this from three causes: *First*, the drains allow the surplus water to filter rapidly away *through the soil*, instead of remaining a long time just below the surface, hardening, and in a manner, puddling the soil. *Second*, if the soil is clayey, drying it by drainage instead of evaporation, causes it to shrink and crack, thus tending to its deeper pulverization. And *third*, into the cracks thus formed, surface mold is washed, which not only keeps the clay from again uniting, but invites the roots of plant to follow the vegetable food thus supplied, thus increasing the pulverization until, in the course of time, it becomes equal to that of the drainage itself.

2. A more rapid method of deepening the soil is by the use of the subsoil plow, or by deep culture with any implement adapted to the purpose. After lowering the line of standing water, we may break up the hard subsoil at once; we shall find it *to* change its character rapidly as it becomes penetrable to the air—very soon instead of being shunned by the roots of cultivated plants it will be sought by them, and they will show by the larger growth above ground that there is a large and healthy growth of roots below. We cannot, we should remember, have the one without the other.

3. The soil may be deepened by a gradual increase in the depth of plowing given in the usual course of preparation for crops. If we have a field which has never been cultivated beyond five inches deep, we may very safely and profitably plow it six inches for the next crop, and go an inch deeper each time for several succeeding crops. There is no difficulty in turning a furrow nine or ten inches deep with our usual teams and implements, after the soil has been thoroughly broken up to that depth, and there few if any farm crops but will fill with roots a fertile soil are one foot in depth. It may require more manure to enrich such a soil, but in the same proportion it will be more productive than a shallower soil, and will continue much longer to give profitable returns without additional manure.

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THE HALLENBECK PLUM.

In our last number we acknowledged the receipt of samples of this plum from Mr. Henry Hallenbeck of East Greenbush, N. Y. In the absence of our Horticultural Editor, we sent some of them to Charles Downing, Esq., who has favored us with the following description:

Newburgh, Sept. 3, 1860.

Luther Tucker & Son—Your favor of 30th, with Hallenbeck Plums, came safely to hand, for which I am obliged. The stems were wanting, and the bloom mostly rubbed off, so that I had to guess at those portions. I have it growing, but it has not yet fruited. I consider it a "very good" plum, but not "best." Its value depends much upon its bearing qualities, time of ripening, and whether much liable to rot on the tree.

Description.—Branches smooth or slightly downy; tree vigorous with straight upright shoots.

Fruit large, roundish oval, one side often enlarged. Suture broad and shallow, ending in a depressed apex. Skin deep reddish purple, sprinkled with numerous brown dots and covered with a blue bloom. Stalk [short, less than half an inch,] in a pretty large cavity. Flesh greenish yellow, juicy, sugary, with a brisk flavor—quality "very good"—adheres closely to the pit, which is roundish oval. Ripe last of any. Chas. Downing.

We shall be much obliged if Mr. Hallenbeck, on whose farm this plum originated, will favor us with its history, bearing qualities, &c.

[For the Country Gentleman and Cultivator.]

The Apple Tree Borer.

Eds. Cult. and Co. Gent.—As much has been said and done of late years about destroying the borer, which has proved so troublesome and destructive to young apple trees, I thought I would communicate to you my experience and successful treatment in relation to the same. Three or four years since I grafted a thrifty young sprout from an old apple tree stump with fall pippins; the graft was growing finely, when one day I noticed the borer was making sad work on the tree, from the ground upwards a foot or more. I had read about applying coal from coal pit bottoms around the roots of trees as good, and digging out the borer and stopping up the holes with gum shellac, &c. I accordingly applied coal braize [the fine charcoal from coal pit bottoms] around the root of the tree, dug out all the borers I could find, cut away the dead bark, and applied a thick coat of tar on the tree where the bark had been removed, and washed the tree with a strong lye from wood ashes and lime. The borer has left the tree, and it looks well and promising. I applied another coat of tar this last spring where the bark had been destroyed. I think tar will prove useful in driving away the borer from young trees. John R. Blair. *Kent, Ct.*

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[For the Country Gentleman and Cultivator.]

Improvement in Feeding-Boxes for Sheep.

The old fashioned box for feeding sheep with hay, formed with two boards on a side—one a short distance above the other to admit the sheep's head—is a most useful thing in thawing, muddy times; though at others its use may be considered doubtful. If they could be made so as to be snugly packed away under shelter without much trouble, they would last much longer, and farmers perhaps would be more likely to have them. This may be done by making mortices in the posts to receive the end pieces, instead of nailing them on. The end pieces can be held in their places by pins, fitted loosely so as to be taken out easily, which will hold the box together. The side pieces of course are nailed to the post. When the box will not be used, the end pieces can be taken out, the pins slipped in their places, and the whole thing packed away where it will not be destroyed by being racked about, or exposed to the weather. J. L. B.

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FINING WINE.

Messrs. Tucker—A very long experience in the wine trade enables me to say to those of your readers who are making wines of any sort, that the whites of eggs are superior to any other fining. They should be entirely separated from the yolk—beat only so as to seperate them, and not to the *frothy* condition prepared for cake-making. Three or four whites to a quarter cask, adding the shells pulverized fine, and a tablespoonful of fine salt; mix these well together in a gallon or more of the wine, pour this into the cask, and see that your measure holds back none of the fining; then give it a thorough stirring from the bottom with a stout stick put in at the bunghole. If you have *more* shells, it will be beneficial to use them, especially if the juice appears to partake of strong vinous acid. The eggs should be fresh, and if the first fining fails give it a second one, but do not stir from the bottom, or let your stirrer go more than half the depth of the cask; the bung should be left loose, a faucet put in the head of the cask, and after a while by a sudden turn of the faucet, a little of the lees drawn off for a few times, and at intervals of some days, until it appears bright in a glass. If the process of fining is very tardy, a small quantity of brandy poured gently in at the bung, and stirred on the surface of the juice, sometimes aids the precipitation of lees. B.

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Elder for Striped Bugs.

I saw a notice in the Country Gentleman of placing the common elder upon vines to keep off the striped bug. Ours were *very* thrifty, and in two days after the bugs made their appearance, the vines were completely covered and eaten. I then placed on some elder, and the next day they were all gone. Maria Brown.

CURING SOWN CORN FODDER.

Messrs. Editors—I wish to beg some information through your valuable columns in relation to a piece of corn sown broadcast—which is the proper manner of curing it, cutting and bundling the same as field corn, or cutting and laying flat in the same manner as hay. Would it be advisable to put on the same land winter wheat after removing the corn in case it was taken off by the 4th or 5th of September? I have been a constant reader of the **Country Gentleman**, and had it in our family for the last three years, and found it of great interest. G. A. S.

Corn fodder, raised by sowing the seed broadcast at the rate of four bushels per acre, or much better if in furrows or drills at the rate of two and a half bushels per acre, gives a much finer and softer stalk than common fodder. It will be all eaten by cattle, but at the same time it packs more solidly in the stack, and is in greater danger of heating and spoiling by fermentation. We have known whole stacks to become completely spoiled, even after the fodder had remained some weeks in the shock, and was apparently quite dry. The stacks must be small, with three rails set upright in the middle so as to leave an opening for the escape of heat; or better, if spread on poles in the loft of a shed. It may be stacked better, handled better, and it will dry better, if bound in bundle; but will do very well if not bound, but raked with a horse rake and pitched with a horse fork. If for binding, the corn grown in drills may be cut with a common scythe so as to fall in even swaths; if for the horse-rake, it may be cut with a mowing machine.

It is a good crop to precede wheat, if it has been sown early enough in spring to be cut by the end of summer; for as it bears no corn, it does not exhaust the soil, but leaves more in the soil in the form of roots, than it carries off.

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MAHALEB STOCKS.

Messrs. Editors—As you are supposed to know everything, I wish to ask five questions about the Mahaleb—a stock used for budding the cherry upon. Does it make a dwarf tree, or will they grow to be as large as those budded upon a Mazzard stock?(1) Are the stocks obtained from seed?(2) Where can the seed be obtained?(3) When to be planted?(4) Is the fruit as good as when budded upon the Mazzard?(5) Please answer through the **Cultivator** and oblige **Jos. E. Phelps.** *Mass.*

1. The tree grows rapidly at first, but does not attain the size of those worked on Mazzard stocks. 2. The Mahaleb is raised from seed. 3. Some nurserymen have begun to raise their own seed in this country, but we do not know of any in market. 4. They may be planted in autumn or early spring, as other cherry seed, having been gathered and treated in the same way.

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PLUMS AND GAGES.

What is the distinguishing difference between a plum and gage? is the gage round and plum long? J. W. L.

All gages are plums, but there are some plums which are not gages. The term gage, originally from the name of the man who introduced the Queen Claude into a part of England where it was unknown, is generally understood to apply to plums of moderate size and rather rich quality, varying, however, in form and color. The Green gage is round, the Imperial gage is oval. The former is green, the Yellow gage yellow, the Purple gage violet, &c. But the term is never applied to very large, or very coarse plums, nor to that peculiar class known as *prunes.*

The same or a more obscure meaning attaches to the term *pippin* among apples, the Fall pippin being very large, the Golden pippin very small; the Newtown pippin is green, the Ribston red, the Downton yellow, &c.; the Sugar-loaf is oblong, the Michael Henry conical, the Vandervere pippin flat; the Blenheim pippin sweet, the Ribston sour, &c., the term, in fact, applying to all apples of whatever size, form, color or quality.

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Fruit in the Shade—Balling Trees.

Eds. Co. Gent.—Are the sun's rays absolutely necessary to ripen fruit? I have a spot of ground so shaded that at this season not more than four hours of sunshine are upon it. Will you or your readers say whether grapes, pears or apples will ripen in such a place?

Will you also please explain the process of "*balling*" a tree for winter transplanting? H. *New-York.*

The sun's rays are not absolutely essential to the ripening of fruit, as is proved by the growth and maturity of specimens on the shaded side of large dense trees. If the shaded trees are fully open to the northern sky, so that they will receive a full share of light from sky and clouds, they will probably succeed pretty well. Apples, grapes and pears will do better in such a place than peaches. As a general rule, if the *leaves*, which furnish the food to the growing and ripening fruit are fully exposed to light and air, the fruit, although itself in the shade, will become fully perfected.

The usual practice in removing a tree with a ball of earth, is to dig a trench about the tree in autumn, fill the trench partly with leaves, to protect its bottom from the frost, and then, when the earth within the trench is frozen solid, to lift the tree and remove it on a sled to its place of destination, where a hole of corresponding size has also been cut for it in autumn. If of considerable size, we should prefer cutting a narrow trench a year previously, so as to cut off all the long roots, that the tree might send out a new supply of shorter fibres. In this way it would sustain less check in transplanting.

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[For the Country Gentleman and Cultivator.]

REMEDY FOR BED BUGS.

"A highly respectable lady who has especial abhorrence" of bed-bugs, has our sympathy, and is welcome to our plan, which has not only kept them from the beds, but banished them from the house within the last month.

Take a cup one-third full of tar—put in candlewick, (say about four feet in length to each bed,)—when properly saturated, wind two or three times around each foot of the bedstead in the smallest part, or on the castor just above the roller; tie loosely, so that it will retain the tar. Cleanse the bed thoroughly several times during the first week. Apply the tar as often as necessary to keep the wick properly saturated, with a brush or feather, and the bugs will soon disappear.

By putting the bandage where the bedstead will protect it from coming in contact with the bed-clothing, the tar will be *less inconvenience* than bugs. M. G. *Leavenworth, Kansas.*

Take five cents' worth of quicksilver, and a piece of lard as large as a hen's egg. Rub them together in a stone mortar or earthen bowl until the quicksilver is well mixed with the lard. This mixture is similar to blue ointment. Put a small quantity in the crevices of your bedsteads. This ointment has the advantage of liquids, as it does not dry and become useless and will remain for years unless it is washed off. V.

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☞ During last year, no less than 629 agricultural articles were patented in this country. Of these, 117 were seed-planters, 113 harvesters, 58 cultivators, 43 plows, 42 churns, &c.

[For the Country Gentleman and Cultivator.]

SHEEP IN TEXAS.

Eds. Co. Gent.—The flocks of Col. C. B. Shepard, near Long Point, in Washington county, prove that many of the prairies in Texas are well adapted to sheep. His sheep, composed of merinos and mixed blood, are now in such excellent condition, notwithstanding the severe drouth, that I give the following items, condensed from his books, for the encouragement of Texas wool growers.

Dr.

Col. S. began wool growing in 1857 by the purchase of 684 sheep, at a cost of	$3,527.50
In 1858, he bought 302 at	1,600.00
1859, do. 14 bucks and 20 ewes, (Merinos,)	910.00
do. do. 8 South Downs	142.00
Total	$6,179.50

Cr.

1858. June, wool sold at residence, 28c. per lb.	$ 912.41
do. 173 sheep sold for mutton do. $4.25 each	785.25
1859, do. wool sold do. 29c. per lb.	1,662.15
do. sheep sold	1,001.00
1860, wool sold at residence, 26c. per lb.	1,880.40
Total	$6,241.21

Many of the prairies are yet unfenced, hence there has been no expense for food, except a small amount of hay and millet, given during the northers of last winter. The flock had little attendance in 1857, save that given by a Mexican dog of great intelligence. It is said that he kept constantly with the flock except when hungry, when he went to the nearest house, and by barking and gestures asked for food, after receiving which he returned immediately to his charge. The dog mixed freely with the sheep. In crossing streams and dangerous places, he would go ahead and encourage them to follow.

Dr.

In 1858 and '59, a shepherd was employed at cost	$425
Three years shearing, say about	200
Salt, say about	60
Total	$685

Cr.

By 80 sheep used for mutton in family, $4 each	$320
30 acres of land manured at $5 per acre	150
Total	$470

Increase by lambs during 3 years, 1,799.

No. of sheep June 1860, 2,430, worth at least $6 each, $14,580, and Col. S. would not sell at $7 per head. No estimate is made of the interest of money used in buying flock, enough being already given to show that Col. S. has large profits. His sheep have always been very healthy. Col. S. says they have increased in size and yield of wool. The number lost by death can be found from the preceding items.

The location of Col. Shepard is amid fine rolling prairies, traversed by well watered ravines, where cedars and other trees grow, giving shelter from the northers in winter. There also the sheep have water, and shade in summer. There is so little dew in Texas that sheep cannot thrive without plenty of good water. S. B. Buckley.

Evergreen, Washington Co., Texas, Aug. 11.

[For the Country Gentleman and Cultivator.]

HOVE OR HOVEN IN CATTLE.

Messrs. Editors—Observing in one of your recent issues some special remarks on the cause and cure of "Hoven," allow me to recommend a simple remedy for the evil, one in which I have so much confidence as to feel perfect freedom in recommending its application.

Let a straw or hay rope (made of two strands of thumb rope laid or twisted together) be introduced between the jaws of the animal, bridlewise, drawing it back by both ends, and tieing it tightly around the roots of the horns at the back of the head, till the jaws are fully opened and gagged. If this is done in the stall and the animal is able to stand or walk, it should be turned out at once and kept moving about, when in a few minutes the distention will subside and all will be well again.

The philosophy of this, simplified, is that the animal finding itself gagged, is excited to effort to get rid of the obstruction, and for this purpose the tongue is brought into requisition to eject the rope, and while this muscular action is going on, some latent valve is opened, by which the gas is liberated and escapes.

I have never known any other remedy recommended that would not be quite as bad, if not worse than the disorder. In a case of pure hoven, so short and sudden are its beginning and ending, there would not be time to prepare and administer drugs, if they could avail, before the case would terminate fatally or be relieved by Nature, while stabbing is so revolting and dangerous as not to be taken into account. The swallowing of a piece of turnip, potato, apple, or the like, is a different condition from that of hoven, and should be treated differently. The probang instead of the straw rope must be used to get rid of substances lodged in the gullet.

Every one having cattle should have one or more ropes ready made for service, so that no time would be lost in constructing one—time is all important in the matter of hoven. If there is any tar at hand it would not be amiss to besmear that part of the rope with it that is to go into the mouth of the animal. I can give no reason for the tar accelerating the process, other than it increases, perhaps, the revulsion or repugnance to the rope, and causes the saliva to flow more freely. But tar or no tar, let the rope be applied as directed.

This remedy has been long known to me, and frequently adverted to through many years. James Gowen.

Mount Airy, Philadelphia, Aug. 10, 1860.

[For the Country Gentleman and Cultivator.]

GOOD SHEEP IN CANADA.

Eds. Co. Gent.—In your issue of the 2d inst., I perceived you gave an extract from the "Southern Planter," which stated that a gentleman of Virginia had been making importations of stock from England. Among the sheep imported, was a Cotswold ram of such size that the editor had the curiosity to measure him. He then gives the dimensions which are certainly large, but we are pleased in being able to state that we can produce something still larger, and we would at the same time, most respectfully inform the editor of that paper, as well as any other of our American cousins who may wish to excel in sheep, that they might possibly be as well accommodated in Canada, and thus save the trouble and expense (not to say risk,) of going across the Atlantic for the desired object.

I have a ram of the Improved Leicester breed, which, after seeing the aforesaid extract, I had the curiosity to measure, and which I found as follows: Length from the top of his eyes to the foot of his tail, (which, by the bye, was cut very short,) five feet two inches—girth behind the shoulders, five feet ten inches—width across the back twenty-four inches—weight 12th August, 353 lbs. The measurement is given irrespective of wool.

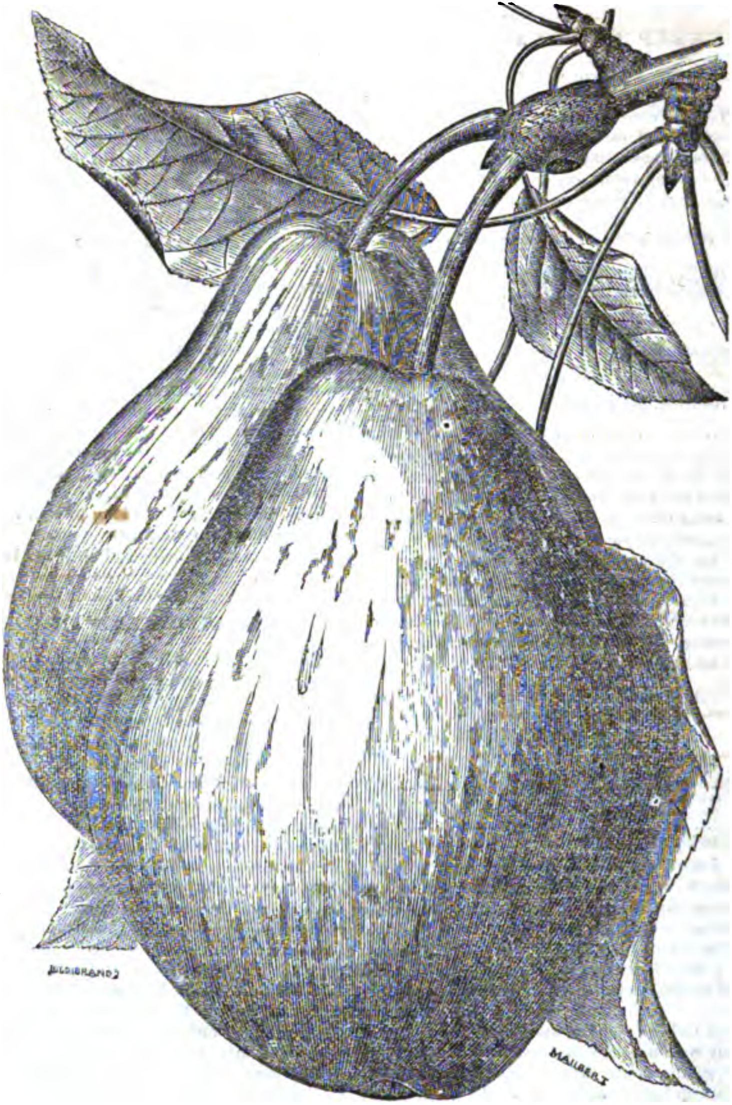
But before I conclude, I would just remark that "size" is not the only desired qualification in sheep, no more than other animals. Our great object should be to combine *quality*, *symmetry*, and *wool*, to correspond with their *weight of carcass*.

Now, gentlemen, since I have taken the liberty to trouble you thus far, allow me to ask of you a little information as to what encouragement is given to foreign or Canadian exhibitors, at your State Fairs. If your terms are liberal, I might probably show the sheep above noticed, as well as some others of my flock, at your next exhibition at Elmira, should they not be disposed of before that time. Thomas Guy.

Sydenham Farm, Port Oshawa, C. W.

The N. Y. State Ag. Society offer prizes of $10 for the best ram—$10 for the best pen of five ewes, and $5 for the best pen of three lambs, for the different breeds of sheep, from out of the State. We shall hope to see some of our correspondent's sheep at Elmira.

Richard S. Fay of Lynn, Mass., one of the best sheep-raisers and agriculturists in that State, has recently imported two Oxford-Down bucks, one of which is two years old and weighs 230 lbs.



BEZI MAI PEAR.

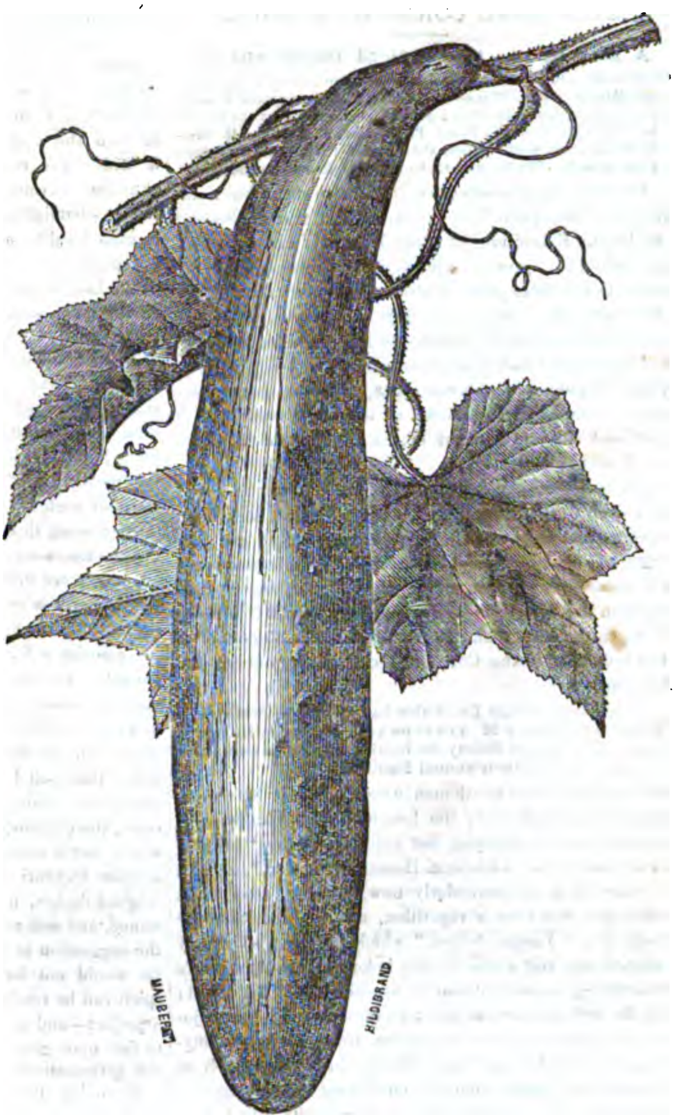
THE BEZI MAI PEAR.

We present herewith an Engraving of this Pear, which is a Seedling originally produced by De Jonghe of Brussels. He describes it in a late number of the Gardener's Chronicle as possessing some points of excellence, which if it would retain on trial in this country, would render it a decided acquisition—a consideration which has lead us to copy the Engraving for the Country Gentleman from the Revue Horticole for June last. Mr. De Jonghe says:

In 1856, when it first bore fruit, it was 11 years old. The fruit, seventeen in number in 1857, were of the Chaumontel form. In 1858 the fruit remaining on the tree after the hurricane of July 25th and at the time of gathering were only thirty. I carefully tasted the fruits of 1856, 1857, and 1858, and determined their quality. From three seasons' experience the ordinary time of ripening is in May, hence the name which is added to that designating its form. At the time of gathering, its skin is of a dull green, marked with brown dots. The eye is small with short stiff open segments; the stalk is brown, woody, of the length represented in the figure. Towards the ripening period the skin becomes of a lighter and more uniform green, with a yellowish tinge, and softening near the stalk. The flesh is as buttery as that of the Easter Beurré, as close as that of the Glout Morceau, and free from grit; the juice is abundant, sugary, and high flavored; the filaments forming the axis of the fruit are very slender and scarcely apparent; the seeds, 4—6, are large, oval, of a coffee-brown color. The fruit is hard and heavy. It is to be remarked that the fruits gathered from the 23d of September to the 20th of October, all ripened equally in May. Those gathered latest were, however, the largest, and proved of best quality. Another point worthy of notice is, that the fruit blown down by the wind in the end of September and beginning of October in 1857 and 1858, have not suffered from their fall.

In conclusion, the Bezi Mai is recommended for the good appearance of the tree, its hardiness, productiveness, the beauty of its fruit, its late and prolonged period of ripening, its good quality, sound keeping, and adaptation for bearing carriage.

Pike's Defiance Cucumber.



PIKE'S DEFIANCE CUCUMBER.

We present herewith an Engraving representing upon a scale of *one-third* its natural size, this favorite English cucumber, especially noted for its abundant product and the precocity and rapidity of its growth. The Revue Horticole mentions an instance in which 13 seeds sown by one of the large Paris vegetable gardeners, gave birth to 13 plants which at the end of *five weeks* had a kilogramme's weight of fruit upon them, about 2¼ lbs., fit for marketing, while another of the best early varieties under the same treatment, furnished nothing at all that could be sold until a fortnight later. This grower reckoned the product of the 13 plants at 25 cucumbers apiece, or a total of 300, and expressed so much satisfaction with it, that it was his determination the present year to occupy no less than a hundred sash with this sort alone.

The Pike's Defiance resembles somewhat the Gladiator and Man of Kent, but is said to excel both in the qualities above remarked—earliness, rapidity of growth, and abundant yield. It is well adapted for forcing, for which purpose some particulars of the French system may be read with interest. The seed is there sown at any time from the beginning of February into May, in pots of about an inch and a half diameter (4 centimetres) plunged in the hot-bed. Re-potted ten days later in a larger size, at the end of a second ten days it is a third time shifted into a pot still larger and at the end of six weeks to its final location in the bed, four plants to each frame about 3 feet 3 inches by 4 feet 7 inches. The culture adopted is to pinch successively to three eyes the stalk and the two principal shoots put out after the first pinching. The plant is then left to itself, except as regards directing the branches in a suitable way; the cucumber should be ready for picking, if there has been a fair degree of sunshine, in six or seven weeks, and it is particularly recommended, if an abundant crop rather than large size is the object sought for, to remove the cucumbers as fast as they become eatable, so as not to fatigue the plant. A successive development of new fruits in very large number is thus secured. Similar pains and similar training are recommended for those grown out of doors, and an equally abundant crop, although not so quick a one, is promised—say toward the end of the second month.

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[For the Country Gentleman and Cultivator.]

Keep the Sheep in Good Condition.

MESSRS. TUCKER & SON—I see there continue to be inquiries as to the riddance of ticks from sheep, and very frequently MR. JOHNSTON'S theory of good care and feeding is doubted, and by others the credit of his success is given to linseed meal, which he feeds liberally. I have long since thought, when I saw him wielding his pen in defence of good care and keeping to rid sheep of that pest, and all others making inquiries as to how they should get rid of ticks on their sheep, that I would take my pen and lend him a helping hand in his theory, or practice if you prefer that word. Some twelve years since I began a new flock of sheep by the purchase of twenty head from a large flock that were in rather poor condition. I fitted a loose stable with boards and floor, in which they were kept nights and stormy days, having boards hung on hinges at the sides, that could be opened and shut at pleasure for the purpose of ventilation. The result was, my sheep gained all winter without grain of any kind or roots, and in the spring not a tick was seen on any of them. Such has been my practice from that time to the present, and some years have wintered eighty—commonly about forty or fifty—have never fed any oil meal, and have never seen a tick on either sheep or lamb during the whole of that time. I think the doctrine of protection from cold wet storms in late fall, winter and spring, with good care and keep, will eradicate all the ticks in America. An experience of twelve years is satisfactory to me at least. Now is the time for those that raise ticks and wish to get rid of them, to prepare a shelter for their sheep, and see that they are taken care of in our cold wet storms, and all will be safe. Such at least is my experience.

Rome, Sept. 5. JONATHAN TALCOTT.

EDITORIAL CORRESPONDENCE.

A Day at the Springfield Horse Show.

Going back to the Beginning—Original Plan Embracing several States and Migratory Exhibitions—Is this Suggestion Now a more Feasible one?—Hampden Park—The Entries and Character of the Show—Mr. Brown's Century Team—Premiums on Walking Horses—Thoroughbreds, Stallions, and the Patchen Colts—Award of State Prise Banner—The Harvest Club—Fields of Roots—Conclusion.

As other engagements permitted me to spend but a single day at Hampden Park last week, and that the Second Day of the Exhibition, (it is the Third and Fourth, which are really the "great" days,) it is of course beyond my power to give from personal observation a very full account of the attendance and proceedings. There may therefore be the more excuse if I imitate the high precedent afforded by that simple-minded and trustworthy Historian of New-York, DIEDRICH KNICKERBOCKER, who, if I recollect aright, commences his Annals of this noble State with a brief and succinct account of the Creation of Man and the Noachian Deluge!

It will not be necessary, at this time, however, to go back even to the date of the Revolution or the Last War; indeed, "not to put too fine a point upon it," if one may venture to quote the voluble MICAWBER,—eight years only will answer our purpose sufficiently well, the present having been the Fourth in a Biennial Series of Exhibitions, of which the First took place in 1853. The Report of it then published in the COUNTRY GENTLEMAN, contains the following:—

> "The project of this Exhibition had its rise in Springfield. In May last GEORGE M. ATWATER proposed to the Hampden County Agricultural Siciety the holding of such an exhibition in connection with their annual Fair."

The health of the gentleman whose name is here mentioned was also given by the lamented C. P. HOLCOMB of Delaware, at the Banquet that followed, as the "originator of the idea of a National Horse Convention." I refer to these facts so particularly now, because, after eight years, they will bear a repetition, and in order that the credit of a "Yankee Notion" which has been so widely imitated, may rest where it fairly belongs. Mr. ATWATER'S undertaking was not without its impediments at the outset; but the high position occupied by himself and his co-adjutors, and their steadfast opposition from the first to anything like "jockeyism" and trickery, have done much to promote the Improvement of our Horses by showing that it is not by any means a cause necessarily allied with gambling and demoralization, but, on the contrary, one in which all classes—both farmers and townsmen—have a pecuniary interest amply worth the sober looking after.

The system of Exhibitions as finally adopted, however, was not that originally contemplated by Mr. A. His first scheme, which seems to me to combine some important features as yet unattained, and well worthy of public regard, embraced the idea of an Association of Subscribers liable as the guarantors of the Shows undertaken, whose profits, if any should accrue, were to be expended in the purchase of stallions from time to time for the use of themselves and others: the Shows to be held in a triennial series—for example, one year in New-England, the next year as far west as New-York or Ohio, the third year as far south as Pennsylvania or the District of Columbia, the fourth again in New-England, and so on; the services of the Stallion belonging to the Association to be migratory with its shows, and the objects being to accomplish still more perfectly the ends now only in part attained—the more general diffusion of good horses, wherever bred, by overcoming the barriers separating the breeders of different localities, and acquainting each region with the merits possessed by the stock of the others—to carry the best stallions of New-England for a season into the neighboring States on the south and west, and to bring back in turn the best blood from those districts, and place it within the reach of Maine, New-Hampshire, Massachusetts, Vermont and Connecticut. By holding the Shows triennially, moreover, when the year came around in each locality, a new generation would be found ready for public examination and trial—the three-year-olders of the last Show coming in as Six, and the colts then sired having made sufficient growth to show fairly the mettle they possessed.

This brief outline will convey but an imperfect impression of the excellent plan which Mr. Atwater at first designed. The public mind was not found ready for its adoption. Subscriptions would have been secured, perhaps, to carry it on, for the financial arrangements proposed, into the particulars of which I have not the space to enter, were of such a kind as to avoid the risk of too heavy a burden being thrown upon a few in case of partial failure, but the necessary co-operation in the other States concerned, was more difficult to obtain, and from this difficulty the design was subsequently modified until it assumed its present form. Springfield has thus to thank Mr. A. and his associates for a fine park, which I hope we shall learn that the present show has entirely freed from all remaining incumbrances, and for the periodical recurrence of an event which draws many strangers from all parts of the Union into her pleasant streets and well managed hotels. But shall I be going beyond my alloted sphere, if I put it here, plainly and directly, to the breeders, the farmers, the citizens, of the region comprised above—say the whole north-eastern quarter of the Union, whether a scheme embracing the principal points in Mr. Atwater's original design, might not now be more favorably entertained, and still more advantageously adopted? I hazard the suggestion at no prompting of his, but confident that he would not be wanting if his experience or public spirit can be rendered of service in the promotion of such a project—and as sowing seed as we pass, that may chance to fall upon good ground, although it should be long in the germination.

Hampden Park contains about sixty acres of that almost perfectly level intervale which here extends, to the width of perhaps half a mile, for about five miles along the eastern bank of the Connecticut, and for nearly three miles on the other bank—land admirable for grass, being subject to overflow from the waters of the river. The Association purchased it, I believe, at about $200 per acre, and immediately expended $4,000 more in the construction of an embankment which keeps the whole perfectly dry in all seasons, and the broad top of which constitutes a delightful promenade along the water-side. A rising stand of seats calculated to accommodate 1,800 visitors, securely and permanently built, is upon the same side of the field—the two tracks only intervening between it and the ornamental double-story erection opposite, for the Judges' purposes. One of these tracks, that nearest to the seats, is a mile in length, and is separated from the interior one, which measures a full half mile, by a substantial railing, so that the two are entirely separate and distinct. The advantage of this excellent arrangement consists in the fact that the carriages of visitors can occupy the mile track without any interference with what is going on within, or the two may be otherwise simultaneously employed for different purposes. In the upper corner of the field near the entrance, a large and permanent structure supplies stables upon each side, an apartment for sulkies, &c., between them, and above them a convenient room, intended if necessary for discussions or other meetings. Long ranges of other stables have also been erected to accommodate the large numbers entered for exhibition.

With so many classes as there are to undergo examination, of course much of the Judges' work is done in the field, where each class is summoned under a flag or sign designating its number. But to maintain a constant interest where the spectators are looking down upon the track, all the classes are exhibited there, and the scene presented is rendered much the more lively by their more rapid succession after one another, as well as by the music of one of the best bands in New-England stationed close by. In all these details the arrangements are so well and systematically prepared, that I have thought them worthy of being brought into notice, as suggestive in many respects to the Managers of other Societies.

The Exhibition this year included Wednesday morning, 532 entries, comprising 617 horses, of which number 184 were for exhibition only—not competing for prizes. I understood that several farther entries were made in the course of the day, and that the total largely exceeds the entries of any former year. The thorough-bred classes, as usual, are not large, embracing but five stallions and four mares. The classes of breeding mares exhibited on Tuesday, were spoken of as having not been quite up to the mark, but the turn-out of Saddle horses on Wednesday was fairish, those of Matched and Family horses, and in one or two other classes, very large; and I was assured by the best judges I met, that while there were fewer celebrities present than has sometimes been the case, to attract notice by their speed upon the track, the average merit throughout shows a most gratifying advance upon the previous Exhibitions.

My own observations were too imperfect to admit of particularizing without seeming invidious, except in one or two instances in which the unique character of what was shown was such as to leave no room for "odious comparisons." Of such sort was the four-in-hand team of *old horses* shown by Lewis B. Brown of Westchester Co., N. Y., heretofore noticed in our columns, and now aggregating a total age of 108 years, the oldest having reached the mature period of 35! The only difficulty in driving them is to *hold in the leaders*, and a *four minute gait** they appear to take much easier than many of their younger brethren. Mr. Brown had generously placed several prizes for fast walking horses at the disposition of the Judges, for which I was glad to know that there were several entries, one including I believe a family of four near relatives, but the trial of these was to be made after I left.†

The only other four-in-hand turnout was that of Simeon Leland, of the Metropolitan Hotel, New-York, who is, moreover, quite a farmer in Westchester. The first and only premium of $200 for thorough-bred stallions, was carried off by "Comet," owned by Alexander Bathgate of Fordham, Westchester, Co., N. Y., and that of $100 on thorough-bred Mares, by Narcissus, owned by Henry Booth of West Farms in the same county. Among other Stallions entered for competition, attracting great attention, were Dr. Rich's "Jupiter" from New-York, Hill & Baldwin's "Patrick Henry" from Essex Co., N. Y., Linsley Brothers' "Pathfinder," from Connecticut, &c., &c.

Charles W. Bathgate, Westchester Co., N. Y., contributed for Exhibition only, three young Stallions, sired by the now famous horse "Geo. M. Patchen," who has done so much to prove that the highest degree of speed as a trotter is not inseparable from *greater size* than has hitherto been supposed likely to make the best time. Two of these colts of Mr. Bathgate's are five years old, "New-Jersey" and "Major Low," and the third, two years younger, "Buckley," promises, as well as his seniors, to make a mark in the world. The one first named, New-Jersey, is the highest bred of the three, and takes the eye most favorably at first, but this advantage is so nearly counterbalanced in other respects by the other two, that it is a very close matter to rank either above the rest.

There is much that I should like to mention, but I find myself already on the "home-stretch" in this correspondence, with its utmost limits closely in view. I am indebted to the attention of the Secretary, J. N. Bagg, for being able to add that at the closing procession on Friday, New-York was represented by 64 horses ("of the greatest aggregate value, probably," remarks Solon Robinson, "of any lot of equal number ever collected together in the United States"); then followed Connecticut with 84, her numbers carrying off the State Prize banner, Vermont with 13, New-Hampshire 5, Rhode Island 7, Maine 6, Wisconsin 2, Illinois 2, and, lastly, the long line of the Massachusetts ranks—the whole thus concluding happily and profitably, without drawback of any kind except in the shower reported on Thursday. We should be glad to publish the list of awards if space permitted.

— But, owing to the kindness of Mr. Atwater, my day was not wholly taken up with the display at Hampden Park. Another institution in which he has had a prominent hand, the "Harvest Club," is doing a good work by the ownership of the excellent Short-Horn Bull, "Double Duke," of Mr. Sherwood's breeding, purchased three years ago—and on Double Duke we made a passing call at the stables of Mr. Pynchon. Thence a mile or two to the northward, where we stopped to see two acres of roots—carrots, ruta bagas and parsnips, which Mr. A. is cultivating successfully and profitably—this year testing upon half-acre plots, manured and cultivated alike, the different results of each, together with those from corn and grass land under similar treatment.

Upon one plot he has adopted a method worthy of mention to those who complain that they cannot put their carrots near enough together to get a good crop and still cultivate them by horse power. This is to put in the carrots *forty inches* apart, and after they have been well cultivated and got a good start—say from the middle to the 20th or 25th of July, to alternate them with rows of ruta bagas (Swedish turnips)—thus occupying the space for another crop without impeding the early cultivation of the carrots. This was intended, I believe, merely as an experiment, and I hope that Mr. A., after the roots are harvested, will favor us with its results, as well as with those upon the adjoining plots. But it should be added that Mr. A. has had no difficulty in keeping the carrots clean, altogether by horse cultivation, even, as I understood, when grown in rows as near together as twenty inches.

— Then, after paying our respects to the sole peach tree in all that region which is known to be in fruit this year, nestling away in the shade when there is little to account for its singular persistence in well-doing,—we gain our way slowly to a higher and narrow plateau, and next to a third and wider one, that stretches back behind a belt of trees to form, I believe, a not very productive and pretty well-worn series of upland farms, but, in the abrupt and wayward curves with which it winds in a succession of knolls along the valley below, affording some picturesque scenery, in the midst of which Mr. Atwater has selected the site of his present residence. The house, protected all around by the trees, except upon the side looking toward the valley, matches the semi-circular form of the "bluff"—as western men would call it—on which it stands, with a bay window commanding—beyond the smooth lawn that breaks away so suddenly, at a little distance, into a panorama of the intervale beyond and below it—the roads along which we came, the farmstead of Mr. Birnie with his Ayrshires in the vale almost in front, the curving river soon lost on either hand between its own green banks, with old Tom and Holyoke pressing their twin summits against the sky at our right; and, away off to the left, another glance of the silvery river, and distant views, mostly in blue and brown, of the farms and farming of the State to which it gives its name. Our day—thanks to many kind attentions—has been a pleasant one, and we could choose no pleasanter spot in which to jot down our closing congratulations to the Managers of these Exhibitions, upon the results of this—their most successful effort in behalf of that noble friend and servant of the human race, of whose beauties and docility we have just seen so many admirable examples among the Horses yonder at Hampden Park.

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* I am not giving them the credit they deserve, as I find them reported on Thursday as making the mile in from 3:15 to 3:30, "four persons in the wagon, without showing a sign of fatigue." I ought to add that the owner of this team does not exhibit for money or fame, but to induce others to take care of their old horses, and also to show that good blood will tell.

† Solon Robinson has the following in the Tribune:—After the cavalcade, the horses entered for Lewis B. Brown's special prize for the best walking horse, were called on and ordered to walk a mile. I regret to be obliged to say that not one-third of the seventeen entered performed the service. They simply proved that horses have not been bred and trained for this most useful of all gaits for a horse for every day work. Nearly all of these exhibited had a sort of amble, about half way between a walk and a pace. The most of them were ruled off by the judges at the first trial. There was one, a five year old Morril mare, a dark grey, which proved herself a square handsome walker at five miles an hour, and she will get the first prize. The second was harder to decide between a bay under the saddle and a bay in harness. These three walked well, and a couple of others tolerably well; but it is very evident that more attention is needed to this feature in horse breeding. There is no doubt about the fact that Mr. Brown has awakened an interest that will not sleep until it has accomplished a great good to the country."

L. H. T.

BUCKWHEAT FOR FATTENING STOCK

An inquiry as to the value of buckwheat for feeding purposes, having appeared in the *Rural New-Yorker*, that veteran feeder and close observer, John Johnston, sends in a reply. We copy below the material facts of his letter. As to the extent and results of his experience, he says:

"I have fattened many cattle, and far more sheep, on all or part buckwheat for the last twenty years, and it will fat stock as well for the amount of pounds as any other grain, oats, perhaps, excepted; and I would much rather have half buckwheat meal than all corn meal to feed to three year old steers that have not been fed grain. I have probably as fat a heifer as is in the State. Her feed was buckwheat bran last winter and spring, and pasture only since the 6th of May."

Mr. Johnston tells us that a friend of his fattened 350 head of sheep last winter on three bushels of buckwheat per day to the hundred head, with straw for fodder and plenty of litter, and he made prime fat sheep, though many of them were lean when he commenced feeding. Some say they have fed sheep on buckwheat with poor success—the animals losing their wool and getting poorer, but Mr. J. never had any such luck, and "no one would from feeding buckwheat who *managed right* otherwise."

The querist wishes to know if buckwheat makes as solid flesh as other grain. To this the reply is, "I neither know or care, as long as it makes them fat." He has never tried it for hogs, to which it is said to be a poison—which is doubtful.

[For the Country Gentleman and Cultivator.]

Buckwheat, &c., for Fattening Stock.

My article on feeding buckwheat, copied from the Rural New-Yorker, ought to have read, in place "of *oats* perhaps, excepted," oats and corn mixed, perhaps excepted. I have often thought that cattle did better on that than any other grain, but oats generally cost more per pound than either buckwheat or corn, and often more than barley. Of course it would be folly to feed oats then. But it matters but little what kind of grain a farmer feeds, if he feeds it by weight. Corn, however, requires the most observation and judgment in feeding to cattle unaccustomed to it.

I never made better sheep than last season, as Capt. McGraw of your city must know. Their feed was barley with a little oil meal. I can make both cattle and sheep fat enough on any kind of grain we raise, except wheat. I tried that when low several times, but it never gave me satisfaction; yet it is strange to say wheat bran will make sheep, cattle, and horses fat. At half a cent per pound it is cheap feed, and it is often lower in Western New-York.

John Johnston.

P. S.—It is nearly impossible for me to write anything for the papers. My correspondence takes all my spare time. I have been answering from 25 to 40 letters weekly, for several weeks past. I must give up answering so many. It is working me too hard, and there is no use in it. The back numbers of the Cultivator for eight or ten years, will give all I know on farming; and the Ohio Farmer, published at Cleveland, for 1858 and 1859, will give a great deal of my experience in draining, and some other matters.

J. J.

[For the Country Gentleman and Cultivator.]

Buckwheat as Food for Fattening Hogs.

Messrs. Editors—Many persons seem to think this grain injurious to swine. I am not of that number. My grandfather was an earnest advocate for the use of this grain in fattening swine. I have frequently heard him tell of a lot of hogs fattened by him some 75 years since, that weighed when slaughtered near 100 lbs. each more than his neighbors judged them to weigh after being dressed. He said they were remarkably fat. The buckwheat was boiled with potatoes, and the hogs, fifteen in number, had a yard to run in, and the straw thrown to them as often as they needed to keep them clean. I think as much of buckwheat for hogs as Mr. Johnston does for cattle and sheep. I feed it frequently and never knew any bad results, even from breeding sows or pigs.

Jonathan Talcott.

[For the Cultivator and Country Gentleman.]

Saltpetre for Throat Complaints, etc.

I see an article going the round of the newspapers headed "Cure for Bronchitis," recommending what has long been known as a remedy for internal throat complaints. It is an almost certain supplanter of quinsy, taken in the first stages, as recommended for bronchitis. For scrofula, king's evil, and complaints arising from impure blood, it is a sovereign remedy, and I know no better ready relief for sore eyes than common nitre or saltpetre. I have known of many, by doctors declared incurable, both in king's evil and inflammatory eyes, completely cured by using this remedy twice or thrice a day. A piece about the size of a marrowfat pea is sufficient for a dose. The best mode of taking it is to let it lay as far back on the tongue as possible, and let it dissolve of its own accord.

Skaneateles, N. Y. W. M. BEAUCHAMP.

FATTENING POULTRY.

Many persons do not succeed in fattening poultry according to the plan generally approved by breeders; and after shutting two or three of them up together in the dark, find they do not gain flesh. In such case they should be at once examined for lice, and if any are found on them, grease them well under the wings, on the breast-bone, and about the root of the tail; or if they are wild and have never been inclined to eat freely and quietly, they should be fed moderately at first if possible, and efforts made to quiet them and make them tame, without which feeling no animal will fatten readily. But by all means keep them free from vermin—either by the use of grease as above, or by mixing a little sulphur in their meal at first. The coup must be kept clean, and fresh water given the fowls; but when about to kill, both food and water should not be given them for some fifteen hours just previous.

S.

A GOOD MILKER.

Messrs. Editors—You recently gave an article headed "Ayrshire Prize Milkers," in which is given the weight of milk of four Ayrshire cows, which won prizes at the Ayrshire Ag. Society in Scotland.

I wish you could give the weight of the several cows.

I have a small Ayrshire cow whose live weight is but 860 pounds, six years old, imported when a year old, which gave 300 pounds of milk in seven days—equal to her live weight in twenty days. I do not mention it as extraordinary, but for the sake of comparison. L. Sweetser. *Amherst, Mass.*

[For the Country Gentleman and Cultivator.]

CUTTING UP CORN.

Eds. Co. Gent.—As this is the season for cutting up corn, I will give you my method of doing it. We take seven rows at a time; the middle row we set the shocks on, leaving three rows on each side. Then, if the corn is very heavy, we set the first shock on the third hill from the edge, and the next on the fifth hill from that, making thirty-five hills in a shock. Ordinary corn I set the first shock on the fourth hill, and the next on the seventh hill from that, and so on every seventh hill, making forty-nine hills to a shock. The next row of shocks I cut the same, placing them on the corresponding hills with the first row.

This leaves them in straight rows each way. My method of putting up the shock is this: I leave the hill uncut; place an arm-full or two of corn around it, and with a single band of rye straw bind it. Then set the remainder of the corn around it, and tie it with a good double band of rye straw. When we come to husk it, we take two of these rows of shocks, throwing down four shocks, (two from each row,) with their tops toward a common centre where we make the heap of corn. Each of these shocks we tie in three sheaves after husking, or four if large, setting the stalks out of the four in one shock. I find this a very convenient mode. My stalks are cured nicely, and I find no difficulty in stacking them so as to keep.

Frenchtown, N. J. J. W. Lequear.

[For the Country Gentleman and Cultivator.]

CURING CORN FODDER.

Messrs. Editors—I occasionally see inquiries as to the best method of curing and keeping corn sown for fodder. With your permission I will give the mode I pursue, although I do not consider it the *best*, for I think all kinds of fodder *housed*, better than when exposed to the weather. But many, after securing their hay and grain crops, have not room, or ought not to have room, for storing this kind of fodder, unless they pull down their barns and build larger, for it requires a good deal of room, as it will not do to pack it close.

I sow the seed in drills two feet apart, and when the corn is tasseled out, it is cut up with a common corn cutter, and laid in small bunches for binding—the bundles should be small, as it cures better. After binding it is put into small shocks and allowed to remain in the field several weeks to dry. It is then drawn to some convenient spot near the barn, and re-shocked, the shocks being made much larger than at first, and the tops well secured by bands of twisted hay—this should be upon elevated ground, so that the water shall not settle around the bottom of the shocks. Here it remains until wanted for feeding out. Treated in this way, I find that it keeps better than when put into stacks, besides it is in a very convenient shape for feeding out. Last fall, however, I made a small stack in this way—rails were placed well up from the ground, and the stalks were laid upon them, butts out—the tops lapping about sixteen inches—the stack was long and narrow, and about six feet high. The top was raised a little, so as to carry off the water, and when finished was covered with a cap of cotton cloth. The fodder kept no better, and was not as convenient for foddering as that in the shocks. If the shocks are well made, the bundles set close and well secured by a strong band at the top, the fodder will keep well until used up.

I have about two acres of this kind of fodder, raised from western seed, which I am now cutting up, and which has attained a very heavy growth. It was sown in drills two feet apart, and worked out once with a light one horse drag. It is quite thick in the rows, and is from six to nine feet high, and not fully tasseled out—the stalks are from one-fourth to three-fourths of an inch in diameter—generally about half an inch. It was sowed the 13th of June. I have another piece of half an acre sowed the 2d of July—this is about three feet high, and is just the thing for feeding milch cows at this season of the year. This piece of ground was fitted and sown to turnips, but the fly destroyed them as soon as out of the ground, and the corn was put in in this way—a light one horse plow running three inches deep was followed by a seed sower, and the seed scattered in the furrow, and covered with the next, and so on through the piece—nothing more was done to the crop. This way of putting in the seed when the crop is to be fed off green, does very well, but for making into dry fodder it is not as convenient to cut and bind as when in drills. J. L. R. *Jefferson Co., N. N., Sept. 14.*

[For the Country Gentleman and Cultivator.]

My Experience in Cider-Making.

Messrs. Editors—Seeing an inquiry in a late number of your paper for cheap Cider Mills, I am induced to give you my experience over thirty years ago in cider-making. At that time I lived eight miles west of the Hudson. I had a fine orchard of choice grafted fruit, and calculated somewhat on making the same profitable to me; but, alas, there was no mill nearer than four miles, and there the fruit was thrown amidst as scurvy a lot as eyes ever fell on; consequently I found I could not obtain the pure juice of my own apples; then too an extra journey had to be taken for the cider, making sixteen miles certain, sometimes twenty-four.

This I knew would not do; I therefore proposed to a relative living with me, that as there was part of a dilapidated cider-press on the farm, that we would make a mill and grind the apples at home. I got two suitable pieces for rollers, which were given to the village turner with a drawing; then I sent to the blacksmith to make teeth and cogs for the rollers, spindles and crank, all according to patterns sent. Whilst this was doing, we were busy making the frame with three-inch scantling and boards. We commenced the making at 4 o'clock P. M; at six had the rollers in, then the cog-teeth and grinding-teeth—the latter I had to draw out, having driven them in too much, and reset them. By 8 o'clock the next morning it was in running order, and worked admirably and remarkably light, having a balance wheel six feet in diameter, made from two tires of wagon wheels. By 4 o'clock P. M., we had seven barrels of cider made and in the cellar.

Now for the expense—I paid out less than two dollars and a half for blacksmith's work, iron, turning, and timber; I had a mill that with careful usage would last twenty-five years; I had cider that I sold for three dollars per barrel, and the apple-pomace for my hogs, after making a cider of inferior grade. Another advantage was, it saved sixteen miles travel—I could make my cider evenings and mornings, or on wet days.

The cider made at the public press, sold the same season for six shillings, that is seventy-five cents per barrel. The rule then was to take eight bushels of apples and receive therefor a barrel of cider, or a barrel of whisky for ten barrels of cider. No charge for making was made.

I have long thought of getting up a simple hand-mill, at from three to five dollars—one that will do more efficient work than any patent mill I ever saw—and I may perhaps do so for our coming town fair.

My plan of cider-making was to grind the apples in the evening—press out in the morning, and let it run all day, and barrel at night; sometimes reverse it, grind in the morning, press out and barrel in the evening—letting the cheese run all night. The pomace I sometimes ran through the mill a second time, then water it sufficiently and let it lay a short time and press it. This forms a drinkable article much sooner than the pure juice, and fines more rapidly. A little water is of advantage to the best of apple juice; I think six quarts to a barrel of pure juice.

Such a mill set coarse, may be used for crushing roots of various kinds, for hogs and stock, with as little labor as that bestowed in cutting straw, and I think at less expenditure of strength. W. M. Beauchamp.

Skaneateles, August, 1860.

☞ Col. J. M. Sherwood of Auburn, has recently sold a fine young Shorthorn bull, "Christmas Duke," 2628, to G. W. Rosenberger, Esq., of Rockingham Co., Va.

[For the Country Gentleman and Cultivator.]

LETTER FROM LEVI BARTLETT.

How the Shakers Unload Hay.

In the Co. GENT. of August 9th, JOHN MOORE of Oxford, N. Y., inquires about the Shaker mode of unloading hay. Unloading hay by means of hook and horse power, has been practiced for many years past by the Shakers at Canterbury, N. H., an account of which was published in the (old) New-England Farmer, some twenty years ago; with Mr. Moore, it "strikes me as being superior to the horse fork, both as to the easement and dispatch." If I recollect right, it required but "four grabs" of the hooks to carry a ton of hay from the cart, over the "high beams," and deposit it, by the aid of the person on the mow, in the right place.

The South Family of Shakers at Canterbury, have recently erected a new and capacious barn, so arranged that the loads of hay are driven into the upper story, and the hay is pitched "down instead of up." Consequently they now have no use for *hooks* in unloading the hay. I was at their place a few weeks since, and saw the hooks which they formerly used, but did not notice their particular form, size, &c. I presume Mr. Moore could obtain the desired information by writing to David Parker, or Robert Shepard, Trustees of the 1st Family of Shakers—post office address, Shaker Village, Canterbury, N. H.

Stable Floors—Tying up Cattle.

In the same number of the Co. GENT., H. P. Norton inquires "what will make the best floor for stables in a basement story."

I do not know but "stone and gravel" makes a good stable floor; but I am quite well satisfied with stable and hovel floors made with good sound pine or hemlock, two inch plank, with an under floor of inch boards. My cattle stand on a raised platform, with a water-tight gutter in the rear, which receives their droppings, consequently they are as clean and free from filth as if they remained in the pasture. In fastening my cattle in the hovel, I have made use of wooden bows, chains and leather straps; but all these gave them too much leeway. They would, when lying down, get back into their filth. Some five years ago I fitted up my hovels with stanchions, and am satisfied with them, and my oxen and cows appear to be so, for they are as eager to get into the hovels, when taken from the pasture at night, in this dog-day weather, as they are in the coldest days of winter. The floors are well littered with sawdust, loam or muck, which gives a much softer bed than Mr. Mechi's latticed hovel floors, which have no bedding of any description. Some of my cows have not passed a night outside of my hovel for five years.

I regret that I had not more particularly noticed the Shaker arrangement for fastening and loosing their cows "all at a time;" but I doubt not that Mr. Norton can obtain the required information by writing to Messrs. Parker or Shepard (as above directed), for it is a principle of the Shakers "to do good and communicate."

[For the Country Gentleman and Cultivator.]

How to Keep Pumpkins.

I see that R. B. P. wishes to know how to keep pumpkins through the winter. To preserve them for domestic uses, they must be cut into thin slices and dried; but I wish to give you my practice in keeping pumpkins for feeding to cows or other stock. As soon as my corn is cut up and stooked, and the pumpkins are ripe enough to be taken from the vine, I take the largest and the best and place them under the stooks of corn, being careful not to break the stem from the pumpkin. This should be done before too many hard frosts. In this place they are left until the corn is husked out, unless wanted for feeding; then they are drawn to the barn and placed carefully on the floor; from thence to the cellar, when the weather becomes sufficiently cool, and be careful to keep them dry and cool. Commence feeding the poorer ones first, and then the better ones, as long as they last.

I am astonished to see many good farmers leave their pumpkins in the field until they become frost bitten and sun burnt, and almost worthless, before feeding them to their stock. A SUBSCRIBER.

[For the Country Gentleman and Cultivator].

POTATOES—FALL PLANTING.

With a view to obtaining new potatoes earlier than by the usual process of spring planting, I prepared a small patch in the garden, as follows:

Dug trenches nine inches deep, two feet four inches apart—strewed on the bottom long stable manure—set early Junes, whole, eight inches apart; then another layer of long litter fresh from the stable, and filled up with four inches of soil. All this on the 18th November.

As soon as the surface got to be well frozen, spread, as is my usual practice, a light layer of straw all over the garden. They appeared above ground 14th May. Dug between rows, and planted seventy-five Early York cabbages. Dug 26th July one and three-quarters bushels and two quarts, leaving the cabbage almost headed. Dimensions of patch, 252 square feet, which, throwing away the two odd quarts, gives 303 bushels to the acre. Such a yield, however, is not to be expected from field culture on a large scale, nor is the process and its results sufficiently tested to warrant its adoption extensively; but under certain circumstances it may be convenient and good economy, and the result of this little experiment affords good encouragement to repeat it.

As respects an *early* crop, the attempt was a failure. Potatoes of same kind planted 3d April came up and matured ten days earlier—the fall planted, however, turned out larger, and very few small—and it is believed much more in quantity, though there were no means of making an accurate comparison.

It is intended this fall to repeat the experiment with "peach blows" (*earliness* being out of the question,) with furrows wide enough apart to admit of plowing between, and filling up *at the proper time* with cabbage or ruta baga plants. C. *Salisbury Mills, August*, 1860.

[For the Country Gentleman and Cultivator.]

BREAD FROM UNBOLTED FLOUR.

EDS. CO. GENT.—A correspondent asks for some directions for making bread from unbolted wheat flour. I have used it in my family for several years, and am glad to give any one the benefit of my experience. We like it particularly, baked fresh for breakfast, and although I am no advocate for warm bread, I recommend this because I never knew it to hurt any one; it is not clammy and indigestible, like bread made from fine flour.

Take a pint of sour milk with a spoonful or two of cream or buttermilk if you have it. Add salt and a table spoonful of sugar (if you like it sweetened;) then stir in the flour, without sifting, of course, until it forms a *very* stiff batter. Add a small teaspoonful of soda. Bake it in shallow pans with a quick fire, and you will have as light and wholesome a breakfast cake as you can desire.

And here let me add that I think this flour makes better griddle cakes than buckwheat.

For bread I think it is best made on a fine flour foundation, that is, when your white bread is ready to mould, but before any flour is added, take out enough for one loaf and add to it one or two spoonfuls of molasses and as much cold water; work these thoroughly, or the bread will be striped; then stir in as much unbolted flour as you can, but do not mould it. Let it stand to rise with the white loaves; it will not appear to rise as they do, but will be ready for the oven at the same time. H. *Keene, N. H.*

Raising Turkeys.

We procured the Bronze Turkeys, and find them more hardy. I not only feed the young turkeys mostly upon eggs, but I give them all the shells, pulverised with the hands. They need something of the kind, and will eat them many times in preference to the inside. I did not lose one out of twenty-eight. They have been running at large for three weeks, and we don't feed them at all.

New-Hartford. MARIA BROWN.

Inquiries and Answers.

Destroying Live-forever.—I am sadly perplexed to know what to do with a field on my farm, which is almost completely infested with "live-forever." Will you or some one of your host of correspondents, be kind enough to advise me how to manage the *pest* so as to get rid of it, if such a thing is possible, or how to employ the field to the best advantage With the pest in it, I might as well abandon the lot as to attempt to dig it out root by root. Wm H. Van Order. *Greene Co., N Y.* [Not having had any experience with this weed, we are not so well qualified to give advice as those who have had it to contend with. We think, however, if it could be turned under and completely buried with a largest size double Michigan plow, it could not survive the smothering process. The work would need of course to be very thoroughly and completely executed. Paring, and carting off the crop for a compost heap, might answer on a moderate scale, but would be more laborious, and probably more imperfect.]

Plants for Name.—Will you please inform me through the Cultivator, if the plants, the flowers of which I enclose, are noxious—they are plants which have appeared in this vicinity within the past few years, and are spreading to some extent; being unacquainted with them, I send them to you hoping you may be able to identify them, and thereby confer a favor upon others as well as myself. W. F. H. *West Winsted, Aug.* 15. [The smaller of the plants sent is the *Trifolium procumbens* or yellow clover, which in some places is becoming somewhat troublesome. The other is only a single, badly pressed flower, and therefore difficult to name, but appears to be a *Rudbeckia*, some species of which we understand are assuming the character of a weed.]

Hop-vine Insect.—Can any of your numerous correspondents inform me what is the name of the insect that devours the *hop leaves*, and if they know of any remedy? P. J. B. *Canada East.* [Dr. Fitch describes the Hop-vine Snout-moth, the most destructive insect that devours the leaves of the hop, and probably the one here alluded to. He thinks it probably introduced from Europe, where, according to the statement of Kirby & Spence, "the hop-grower is wholly at the mercy of insects—they are the barometer that indicates the rise and fall of his wealth." They make their appearance suddenly and in immense numbers, and in a few days destroy whole fields. If the hop-grower in Europe has so long suffered from their destructive attacks without remedy, the prospect is not very encouraging here. Dr. Fitch says the only remedy he has seen mentioned, is syringing or showering the vines with strong soap suds or with a solution of oil soap in the proportion of two pounds of the soap to about fifteen gallons of water, but he does not say how efficient this remedy is. It would obviously require great labor and some expense to go over large hop fields.]

Salt as Manure.—Will you inform me through the columns of The Cultivator, whether it is practicable to use salt as a manure, and if it is, to what soils is it the most beneficial, and how is the best mode of applying it? A Wright. *Alaways Town.* [Salt has been tried to some extent as a manure, and has mostly proved beneficial, more especially to the wheat crop. A few bushels may be sown per acre, and it soon finds its way into the soil by solution. Our own observations indicate the best results on heavy soils.]

Tobacco.—"L. B." wants to know about culture of tobacco. The culture is very simple, the main object seeming to be, to "make it grow;" but if "L. B." has no means of learning *practically* the mode of "cutting, curing," &c., he had better let it alone. The plants are obtained from a plant-bed as cabbage plants are. F. S. *Delta, Tenn.*

Osage Orange.—Tell Inquirer about the Osage Orange, that it is readily propagated by pieces of root eight inches long, set in the spring, with one end just at the surface. It is more sure than seed to grow. A. S. M. *Fredonia, N. Y*

Lois Weedon Wheat Culture.—On page 362, vol. xv, in the account of the system of half fallow culture pursued at Lois Weedon, the average yield of wheat is stated at thirty-six bushels [illegible] annum. Does this apply to the *whole area* of five acres, [illegible] only to the alternate strips? In other words, do these strips yield at the rate of thirty-six or seventy-two bushels? The latter, though not unprecedented, seems an immense product. Novice. [As but one-half the land is planted, the produce on that portion must be at the rate of seventy-two bushels per acre; but it must not hence be inferred that if the whole land was seeded, the acre would produce seventy-two bushels.]

Fife Wheat.—Tell S. B. W, who inquires for Fife wheat, samples of which of which I enclose you, that Walder Buck of Polo, Ogle co., Ill, has a field of 300 acres in Fife wheat this year, and there is another man at Shusong, who has 1600 acres in wheat, mostly Fife. It is extensively raised in this country, and is a good wheat, only it is late in ripening. It should be remembered that it is a spring wheat. J. B. *Mount Morris, Ill.*

Indian Corn.—We southern farmers are surprised at the large yields per acre of corn at the north, and I believe you would confer an especial benefit on many readers, by getting one of your *successful* farmers to give a thorough account of their preparation for, and culture, and product of a corn crop, together with the quality of land, variety of corn, distance, implements, time of planting, &c.; and by no means an unimportant item, the locality or latitude in which the crop was made, which I think does not appear as often as it should in the accounts of what some one did, and how and when he did it. F. S. *Delta, Tenn.*

Warts.—Can you or any of your readers inform me of a cure for warts on a cow's teats? I have a valuable cow badly affected that way, and it is a painful operation for her to be milked. A Young Farmer.

Onions.—I have a field of onions, some of which are very late. Is it advisable to roll the tops down? If so, what is the method of doing it? D. J. B. [Will some of our onion growers answer the above?]

Threshing Machine.—Can any of your numerous subscribers inform me which is the best machine now in use for one horse? I have lately seen a power patented by William Darling of Cincinnati. Has any one used this power who can pass upon its merits? Any information in regard to threshers and horse-powers will be thankfully received.
Limerick Bridge, Pa. M. R.

☞ Please print a recipe for making huckleberry wine, and much oblige A Subscriber. [We are unable to find a recipe for this purpose in any of our books. Perhaps some of our readers can furnish one.]

Topping Carrots.—Can you or any of the readers of the Gentleman, give any easier or more speedy way of topping carrots than taking each one up separately and performing the operation with the knife, a very slow and laborious course? Could it be done with a scythe before digging? W. J. P. [The work is usually done with a knife, the top being used to assist in drawing the root from the earth. A scythe would not do the work with sufficient accuracy or evenness—but a good steel hoe, ground sharp, might be used, and if a deep furrow were carefully plowed from each side, the roots might be taken out easily. A subsoil plow has been advantageously employed.]

Modern Architecture.—Will you please inform me if there is any American work on Architecture, which is good and explicit authority as to the proportions of the various parts and members of the modern Rural Styles, or of which the illustrations even, are models from which such details and proportions can be selected? Amateur. [We do not know that we quite understand what our correspondent wants. The plans of Houses furnished in the Register of Rural Affairs, and from time to time in this paper, are all drawn upon a scale showing "the parts and members" in due "proportion" with one another; but it is our impression that as a general rule it is the safest and least expensive mode for inexperienced persons to put their plans, however perfect, into the hands of a well qualified architect or builder for execution. More ideas and suggestions with regard to plans can probably be [illegible] in the two volumes of Rural Affairs, (sent post paid for $1 each,) than in any other work of equal price.]

Blood Spavin.—Seeing an inquiry from Bath, Me., for a cure of the blood spavin, will you please publish the following remedy that with me has always effected a cure if timely applied, and on a young horse. If the spavin is of long standing it is very difficult to effect a permanent cure. Take the root of the poke weed (*Philolacca decandra*;) cut it in thin slices, and boil it in urine till soft; with this decoction bathe the affected part once or twice a day till a cure is effected, rubbing the swelling quite hard, downwards, with the hand or any other smooth substance. It should not be so strong, nor so frequently applied, as to remove the hair. If the poke weed does not grow in the neighborhood of the inquirer, we will send him a few roots by express if he will direct where to send them. [illegible] Dennis. *Applebachville, Bucks Co., Pa.*

Ice Houses.—I saw something about ice houses in one of the nos. of Co. Gent. I have one made two years ago, 16 feet deep and 16 feet in diameter, perfectly round, made of stone, plenty sand at the bottom to take off all water. I filled it last winter with snow ice, (best I could get,) just threw it in without placing it and covered with straw, (put straw at the bottom on rails first,) none on the sides, and *we have used ice* and plenty left yet. W. HALL. *Carroll Co., Ky.*

CALLANAN'S DITCH-DIGGER.—I see an article in the July CULTIVATOR, p 224, on "Cheap Draining." Will you have the kindness to describe the implement used, and the probable cost laid down here, being 14 miles from railroad, and whether it can be used to advantage on muck land, and stoney hardpan bottom? I use stone for forming the drain—want to cut a ditch 18 inches wide, 3 feet deep. Please also to inform me the manner of applying the power. J. C. ELLIS. *Frost Village, C. E.* [The implement alluded to was described in THE CULTIVATOR for May, p. 148, to which we refer our correspondent for all the information he asks for, with the exception of the price, which he will find advertised in the July no., p. 230.]

CLEANSING WOOL.—I wish some of your subscribers to give through the columns of THE CULTIVATOR, the best method for washing wool after it is clipped, how to cleanse it and get the gum and dirt out without injuring the wool, and prepare it for carding into rolls. It will be of great benefit to the good ladies out west, for many of them know nothing about preparing wool. Also the best method to wash the cleanings of cards, as they are greasy and pull up dirt. I wish to know how they may be cleaned to card again.

Henrysville, Ky. D. M. FOULKS.

EDITORIAL CORRESPONDENCE.

Provincial Exhibition of Upper Canada.

The grounds upon which the Show was held are within the city limits, although nearly a mile, perhaps, from the central hotels. They comprise eighteen or twenty acres admirably adapted for the purpose, although neither regular in outline nor level in surface. A broad graveled walk leads from the main entrance, which was arched over and appropriately ornamented with evergreens, to the "Crystal Palace," standing at the head of a gentle rise upon an altitude sufficiently great to be seen at a considerable distance to good advantage. The actual cost of this building alone, I was informed, was fully $12,000.

Of the contents of the Crystal Palace I must speak cursorily, except as to the fruits and grains, which deserve particular mention; they included a general show of manufactured products, considerable machinery, musical instruments, quite a fine art collection, models of various kinds, artificial manures, &c., &c., all in sufficient numbers to convey to a stranger like myself, on his first visit to this part of Canada, a most favorable impression of its home resources and advancement in the useful and ornamental arts. On the western section of the ground floor, the display of garden vegetables as a whole, was certainly one of the *best* I have ever seen, if others may have surpassed it, in some particulars and perhaps also in mere extent. To the north were the dairy products, of which, both butter and cheese, the exhibition was very fair.

The GRAINS, however, as just intimated, and to which we are now coming, must be classed among the half-dozen prominent features of the Exhibition, in any and all of which I cannot but regard it as comparing most creditably with any Show I have ever seen. As to extent, an idea may be obtained from the following summary of the principal entries:—

Best two bushels of Winter Wheat,	88	entries.
Best two bushels of Spring Wheat,	84	do.
Best two bushels of Barley,	64	do.
Best two bushels of Rye,	21	do.
Best two bushels of Oats, white 53, black 19,—total,	72	do.
Best two bushels Field Peas,	79	do.
Best bushel white Field Beans,	29	do.
Best two bushels Indian Corn, white 25, yellow 40—total,	65	do.
Best bushel Timothy seed,	60	do.
Best bushel Clover seed,	17	do.

But more striking than all this, were the *thirty-two* entries, each of *twenty-five bushels* Winter Wheat, competing for the Canada Company's prize of $100, offered in the following language:

> For the best 25 bushels of Fall Wheat, the produce of Canada West, being the growth of the year 1860. Each sample must be of one distinct variety, pure and unmixed. The prize to be awarded to the actual grower only of the Wheat, which is to be given up to and become the property of the Association, for distribution to the County Societies for SEED.

This liberal premium was wisely supplemented by the Association with four others, respectively of $50, $40, $30 and $20, the winner of the first only being called upon to give up his wheat, but all required to furnish the Secretary with a written statement of the nature of the soil, mode of preparation, the variety and quantity of seed, and time of sowing, manures, (if any used,) produce per acre of grain, and any other particulars of practical importance, before being paid the amount of premium.

As to quality, it is difficult to imagine how it could have been much better; probably no premium was taken by any sample weighing less than 63 or 64 lbs. to the bushel, while I was told by one of the Judges that the weight of the first prize sample of two bushels was 66½ lbs., while that of the whole *twenty-five bushels* shown, in one or two instances, averaged throughout over *sixty-five lbs. per bushel.* The crop has this year, as may be imagined from the above, been an extraordinary fine one in some localities; one farmer standing by stated that in his vicinity he believed that 40 bushels per acre would be no more than the average yield, while he personally knew of instances in which *fifty-two* had been obtained. Whatever allowance may be required for this, as an exceptional case, it is enough to indicate—like one or two other matters to which I shall refer in due time—that our best farmers will have to *look to their laurels.*

The FRUITS which, with a less extensive assortment of Flowers, constituted the most ornamental and striking display in the Palace building, represented excellently well what I suppose to be the best Fruit region in Canada—that lying between the two lakes, Ontario and Erie, especially that part of it more immediately adjacent to the northern shore of the latter, while, indeed, it is probable that through a great part of the two counties of Lincoln and Haldimand, fruit may be cultivated to better advantage than in any other part of the province of equal extent. I do not wish to appear invidious in the mention of names among so many that were deserving of particular notice for beautiful assortments, but I could not forbear particularly remarking the complete and handsome lot presented by our correspondent, D. W. Beadle of St. Catherines, from his father's nurseries at that place—including 80 varieties of Apples, 30 of Pears, 10 of the Peach, grown in open air, 10 of Grapes, with a collection in jars of preserved small fruits—and I make this mention the more readily because I availed myself of Mr. B.'s experience to obtain for the benefit of our readers in that region, a list of sorts which are found to be most successful in its climate and on its soils, for practical purposes, including general hardiness, productiveness and superior quality. For example the 20 sorts of Apples selected by him, with all these considerations in view, were these:—

SUMMER APPLES.
Early Joe.
Bough, Large Sweet.
Early Harvest.
Primate.
AUTUMN.
Duchess of Oldenburg.
Gravenstein.
Jersey Sweet.
Snow Apple or Fameuse.
WINTER.
Baldwin.
Hubbardston Nonsuch.
King of Tompkins County.
Northern Spy.
Pomme Grise.
Rhode Island Greening.
Ribston Pippin.
Roxbury Russet.
Seek-no-further.
Talman's Sweet.
Norton's Melon.
Wagener.

This list, it will be noticed, contains many of our old favorites with a few kinds of more recent introduction. A dozen sorts of Pears, which generally succeed well with him, are the

Madeleine.
Osband's Summer.
Beurre Giffard.
Bartlett.
Buffum.
Beurre Bosc.
Belle Lucrative.
Flemish Beauty.
Seckel.
White Doyenne.
Beurre Diel.
Easter Beurre.

The Bartlett, however, suffers in some localities from the extreme cold which occasionally prevails.

But our time is limited and we shall see nothing of the Live Stock unless we abandon at once the charms of Pomona. I said there were half-a-dozen prominent features of excellence in the Show, and if the Grains and Fruits were entitled to rank among them, not less so is the display of Cattle throughout, and that of Sheep in the classes of Cotswolds and Leicesters. I say nothing of the Horses, for beyond one or two good specimens of the heavy English dray horse, I saw none of them; and, as to the Swine, it may be added in few words that the Show was a respectable one, without anything particular to attract attention unless it was some pens of Imported large breeds, which were almost constantly surrounded by an admiring crowd. I am indebted to the kindness of Mr. Secretary THOMSON for the privilege of ascertaining from the Society's books that there were about 700 Sheep on the ground, and that the Entries of Cattle in their respective classes were as follows:—

Short-Horns (Durhams)	58	entries.
Devons,	160	"
Herefords,	30	"
Ayrshires,	86	"
Galloways,	42	"
For best bull of any age or breed,	21	"

Among the Short-Horns, some were entitled to praise as really first class animals, and the range of merit throughout was above the average, while here in some degree, and still more among the Devons, not only does the contribution by so many different exhibitors to make up the show, speak well for the distribution of improved stock in the hands of the farmers of the country, but the excellence of the young animals bred from imported parents also proves that the breeders are working well for the interests of the herds they are rearing.

It is an unpleasant task to call in question the decision of appointed judges, and one that I am never disposed to undertake; for, if minor differences of opinion are to be canvassed at length, we should have room for little else. But among the few prize cards that had been distributed when I made the rounds of the stalls, there was one instance of gross misjudgment which I do not think it just to pass by. Mr. Frederick Wm. Stone of Guelph, exhibited, among other Short-Horns, the imported cow "Desdemona," bred by Mr. Ambler, of which I am saying a great deal, but not too much, when I add that not half a dozen of the cows ever imported into this country would care to compete with her before any intelligent judge, notwithstanding which fact she was placed third to a first and second, one of which latter was just a nicish sort of beast, and the other could scarcely have come out ahead among some high bred grades I have seen at our shows. As consolation, Mr. S., however, took the herd prize in which this cow, "Desdemona," was included, together with the bull "3d Grand Duke," of his own breeding, the cow "Eugenia," also imported from Ambler, and a pair of heifers that were very sweet and pretty. The Millers, John Snell, and others, were prominent among exhibitors, but I should scarcely venture to name any for the reason that so few of the cards, from which alone they could be had, were given out when I took my last look.

The Devons, as will be seen from the number of entries, were out in large force, and this, together with the excellence of many, gave the breed some prominence over others. The Galloways showed an evident gain in public opinion, and I cannot but renew the opinion I expressed in writing from Scotland last year, that they are well worth more attention than we have ever given them. I should regard the display of them here as a very fair one—the aged stock showed good size in several instances, straight and tolerably even contour and good "quality," while among the young things there were one or two promising even better.

What can I add, with regard to the sheep, to what has been already said? Mr. Stone, who has just returned from England, has imported recently over 50 head of Cotswolds. He was exhibiting about 40 out of his flock, upon which he had altogether 14 prizes. He also showed a pen of South Downs, two imported and two of his own breeding, that were very nice. The entries of Leicesters alone were 76 in number, including among them many that I should be glad to notice at length, and the Cheviots formed a class seldom seen in our show-yards, but one of which I may repeat what was just said of the Galloways, that they deserve to be better known.

The show of POULTRY was large, the coops admirably arranged as regards the comfortable examination of their contents, and the long range of roofing under which they were sheltered was constantly crowded.

Among the implements no visitor could fail to notice the number and variety of CULTIVATORS that were exhibited, and connected with this fact may be mentioned a second, namely, that the show of ROOTS—although a gentleman assured me that they had had more and better on some other occasions—was certainly among the very best that I have ever seen, including particularly Long Red and Yellow Globe Mangolds, Sugar Beets, Swede Turnips, and Yellow Aberdeens. The show of Potatoes was also very large and admirable.

It is in this matter of sheep, roots, and implements of tillage, that we "Americans" might profitably study the example of those of our brethren in Canada West, who have brought into the practice of colonial cultivation some of the best ideas of the old country farming. My friend above alluded to had 40 acres of turnips and rape on his farm, the latter for sheep feed during August and September when grass is likely to be short, and he represented this attention to roots as no unusual thing in his district of country. Over twenty-five years experience in this country had only served in his case to strengthen that very peculiar British prejudice in favor of ample manuring through the agency of the farmer's sheep and cattle, which seems most singularly to have melted away under the free and enlightening influences of republican agriculture. I cannot pursue the subject, but I shall hope sometime to have the opportunity of examining more closely the farming, of which such roots, and sheep, and cultivators, are the emblems, for they, as well as the crop-reports of which I have above given an example, savor more strongly of the principles and the success of "English Agriculture" than anything I have seen for just about a twelve-month past.

As one draws to its conclusion a letter like this, which must be mailed, whether ready or no, at a certain hour of the clock, many things press forward upon the mind, for which room can scarcely be found in pen and ink. Among matters especially demanding notice is the public spirit with which Hamilton, in common with several other Canadian towns, has come forward in support of the great interest on which, more than any other, the prosperity both of that country and of ours, is dependent—its agricultural improvement.

The total amount expended upon the grounds and erections here, of which I cannot make room for a fuller description, was stated to me at $35,000, including the Palace building—$22,000 of which, if I understand rightly, is appropriated by the city authorities. The buildings are permanently erected, and with great perfection, convenience and completeness; there they stand for the use of the local society, and for other purposes, with each recurring year, and for the Provincial Association as it alternates from place to place, perhaps once in three, four or five years. The grounds are like a park, and may be regarded one for all practical purposes. It seems to me that we shall have to revert to some such system on our side the line, sooner or later; the example of public enterprise shown in this direction by our Canadian neighbors is particularly worthy of remark, for the expensive system of annually fitting up structures which the demand of exhibitors compels us to make more and more costly with every year, is one that often bears unequally upon private generosity, while, at the same time, there are so many advantages which may result in other directions from the possession of complete and permanent erections, that it seems legitimately a matter coming within the range, as they have there regarded it, of some decided action on the part of our State or local authorities. L. H. T.

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☞ MRS. JAMES HALL of this city, will please accept our thanks for fine Bartlett Pears, as well as for similar polite attentions heretofore.

HARVESTING CLOVER SEED.

Some hints on harvesting clover seed may prove valuable to the farmer—but first, a few items in regard to growing it. A rich soil and favorable season are required to produce a large crop. The first growth is mown early—as soon as fairly in blossom—for hay; leaving the second or after growth to go to seed, as it is usually less rank and better filled than the first. Sometimes, however, both the first and second growth may blossom largely and yet produce very little seed—from some cause not well understood. It is said that the application of plaster to the clover field in spring will secure a better yield of seed from the second crop, while a direct application after mowing the first growth is found to increase the rankness of the hay at the expense of the filling of the heads with seed.

Clover seed should be harvested as soon as sufficiently ripe, and we would only wait until two-thirds of the heads were brown before commencing the work. Early cutting generally gives better weather for curing; there is less loss of seed from the shelling out of the earliest, best filled heads; and the straw is of greater value as fodder for cattle than if allowed to stand until the whole is dead ripe. Besides, the later ripening heads, for which we wait, really have little value, being poorly filled with seed.

The best implement for harvesting is a reaper—the grain platform attached, with a board at the back edge to retain a larger amount of clover—when full to be pitched or raked off in heaps. If clover stands well it may be cut high; it saves time in curing and labor in handling, and leaves the dryer portions of the stalk upon the field. As soon as fairly dry, it should be drawn to the barn, as it cannot be secured in the cock against rain. When spread out, however, as when left in the swath, or in small gavels from the reaper, it is little injured by rain, though heavy storms may wash off a portion of the seed.

In cutting with the scythe, we may turn two swaths together to facilitate the work of raking. With good weather it will be cured sufficiently to draw in the second day after cutting; if not, it may be raked, when slightly damp, into small bunches, or pitched together with a barley fork. Care in handling is requisite to prevent loss from the dropping of the heads, and, from the stiff bush-like character of the straw, it may be placed in the mow in a greener state than hay or grain without injury. The moisture should be dried off, but an occasional juicy stalk will do no harm.

The seed can be separated from the straw with a common threshing machine cylinder, having a long shaker or box full of holes attached, so that the heavier part of the chaff which contains the seed may fall through. This work is best performed in freezing cold weather, when no dampness is present in the seed or air. To get the clean seed, a clover huller is employed—a machine which rubs the seed from the chaff, which is passed through it again and again, until the separation is complete. Wherever the crop is much grown, there are farmers who make it their business to go from barn to barn with these machines—threshing, hulling, and cleaning the seed at a specified price per bushel, usually about one dollar.

If grown only in small quantities for home use, clover seed may be threshed with flails, or trodden out with horses, and sown in the chaff, which is full as certain to "catch," and perhaps more sure than that cleaned so nicely. Still it is difficult to regulate the quantity as closely, or distribute as evenly, as with the clean seed, but by putting it on liberally one may be sure of a thorough seeding.

Though as a general rule "farmers should raise their own grass seed," we question the policy of taking repeated crops of seed from every clover meadow—believing the practice to tend rapidly to the exhaustion of the soil. An occasional crop may be allowed, but very often the hay would prove of more value than the seed obtained, considering the comparative labor of securing, and effect upon the soil.

[For the Country Gentleman and Cultivator.]

CULTURE OF THE STRAWBERRY.

Messrs. Editors—Having numerous inquiries about my "strawberry patch," as to soil, cultivation, &c., allow me a little space to answer them. The soil is a loamy gravel, with porous subsoil, and has only been worked twelve to fifteen inches deep with a plow. Ten years ago it was occupied by fruit trees, which were removed to make a garden, and was occupied as a vegetable garden till two years ago last fall. I set out thirty plants of strawberry (Wilson's,) on a small part of it. One year ago last spring the remainder was set also, three rows on the bed which is bounded by my gravel walk on one side and an open drain on the other, which carries the slop water from the kitchen.

The land is only in fair condition—has had no manure since I first began to put out the strawberries. The plants have run and covered the ground, but have been taken out where they were too thick, but I did not make them quite thin enough to allow room for picking, which I think is best.

But the secret I think is, that my well is but a few feet off, and the bed was supplied with one to two barrels of water daily from a hand sprinkler. The first carried to market was June 4th, and we had a supply for the table over four weeks from this bed.

The manure used while raising vegetables was barnyard and muck.

Since done picking in July, I mowed off the old vines close, and with a spade turned under all but three rows eight to twelve inches wide, which are now covered heavily with a new growth of leaves. I forgot to say I put about half a cord of tan bark on this bed last spring.

Some one once said (I think Mr. Pardee,) that "a lazy man could not raise strawberries," and acting on this, no weeds have been allowed to get a foot-hold. No special fertilizers have been used. A. S. Moss. *Fredonia, N. Y.*

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[For the Country Gentleman and Cultivator.]

To Exterminate "Iron Weed," &c.

Messrs. Editors—In reply to your inquiry on this point, for the benefit of P. D., Bullitt Co., Ky., I would state as my experience, that "iron weed," and many other pests to Kentucky woodland pastures, can be easily eradicated in a few years, by systematic cuttings twice a year before the ripening of their seeds. As akin to this, I will add that locust or other tree sprouts, infesting either pastures or cultivated lands, may be destroyed most easily by cutting one or two years successively, in the latter part of August.

Perhaps it would be well to suggest to your correspondent, W. A., Iowa City, in default of a *certain remedy* for "foundered stock, which may get into a cornfield and eat too much," that the prevention of that occurrence by good fencing and selling or confining breachy stock is entirely practicable. T. B. *Woodvine, Ky.*

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[For the Country Gentleman and Cultivator.]

PICKLED PLUMS.

Seven pounds of plums—4 pound of sugar—1 quart of vinegar—1 ounce of cloves—1 ounce of cinnamon.

Boil the vinegar and sugar together, and pour them over the plums, three mornings in succession. The fourth morning put them all over the fire—simmer but not boil. Lay the spices in layers with the plums before the vinegar is poured on.

Cucumbers.

Take 1 gallon of molasses, and 2 gallons of water, and pour over your cucumbers, and in three weeks you will have good pickles.

Tomatoes.

Take green tomatoes, slice them, scald in salt and water with the addition of a little alum, until they begin to be tender; skim them out, and put them in a stone jar. Take enough good vinegar to cover them, and to every quart add one pound of sugar and spices. Scald them and pour over the the tomatoes hot. S. M. H. *Alburgh, Vt.*

THE CULTIVATOR.

ALBANY, N. Y., OCTOBER, 1860.

☞ During the past week we had the opportunity of spending a day at the Agricultural College Farm at Ovid upon Seneca Lake. The transverse wing at the extreme south and the longitudinal wing which connects it with the site of the central Building, are now completed, and will be furnished in the course of the coming Autumn; the former, 60 by 84½ feet, and four stories in height, and the latter of three stories, 58 feet by 128—the two calculated to accommodate from one hundred to one hundred and fifty students, with apartments in the basement for temporary use as recitation rooms, etc., which are designed subsequently to find place in the central erection. The provision for thorough ventilation is remarkably complete; and the arrangements for heating, by means of warm air, and for lighting with gas, will probably prove economical as well as conducive to health and comfort.

We understood it to be the determination of the Trustees to open the Sessions of the Institution with the Winter Term, the first of December next. Major M. R. PATRICK, the President, will soon have a circular ready with full information as to the Classes for which Students will be received, the Text books decided on, the additional Instructors appointed, together with such other particulars as may be required, which may be had by addressing him at Ovid, Seneca Co.

The location upon the lake is a pleasant one, and is more accessible than many have supposed—the lake remaining unfrozen in winter, so that the Ovid landing may at any season be reached by steamboat from Geneva in about two hours, or from Jefferson at the head of the lake in a little longer time, from which latter point there is railroad connection with the Erie line and all its numerous branches. From the village of Ovid, which the College Farm adjoins, there is a fine view of Cayuga Lake, some miles to the eastward, and ready access may also be had, if desired, by various means of communication in this direction.

— From Ovid we proceeded to Elmira, where, in the midst of a driving rain, we found the grounds allotted for our next State Fair as dry and hard as possible, their gravelly soil being capable of any extent of saturation without becoming muddy. The buildings are now well under way, and the promise of attendance from "the southern tier," from Pennsylvania, and from our western counties, we were assured was very large—so much so, that probably the full capacities of the place will be taxed for its accommodation, although Elmira is well provided with hotels, and is said to contain a population of eleven or twelve thousand by the census of the present year.

— Returning home by way of Rochester, we found over the whole area embraced in our inquiries, a reported Wheat crop, perhaps fully equal to the large yield of 1859. Major DICKINSON assured us at Elmira, that the yield per acre was actually proving *five bushels larger* than anticipated, throughout the central and western portions of the State, so favorable has the season been to the production of plump grains and full ears. As to Oats, we were rather surprised to find so large a quantity all along our route, still exposed to the weather, much yet uncut, and some that had apparently been already "kept out in the wet" for many showery days. This crop is said to be large, notwithstanding the loss that must have thus been occasioned. Corn is generally late, but, without frost next month, will probably turn out pretty well. The Orchards appear to be wonderfully productive through all Western New-York. Near Ovid we remarked an old garden of plums hanging as full of fruit as though that millennium had already arrived when the curculio shall no more ravage and destroy; and all about the City of Nurseries we were told that plums, pears and peaches, as well as apples, will be unusually abundant and perfect. At Rochester we regretted having no more time to visit our Horticultural friends, who seem, from all we can learn, to be thriving most satisfactorily on the growing public appreciation of fine fruit, and taste for ornamental trees and plants.

The Potato Rot is everywhere beginning to show itself quite plainly—the tops in some fields being already entirely gone. The few who have thus far escaped its attacks, will have to regard it we fear as only a question of time, for the weather still continues of precisely the kind best adapted to promote its extension.

THE WHEAT CROP AT THE WEST.—All accounts represent the wheat crop in the Western States as much larger than was anticipated. As samples of what we find in our western exchanges, we quote the following:

The Ottawa (Ill.) Free Trader of Aug. 1[illegible], says—"The wheat harvest in this region presents the singular feature of turning out much heavier when the wheat comes to be threshed than was anticipated. It is a very common remark among farmers, that where they anticipated a yield of 20 bushels to the acre, it has gone up to 30 or 35. 30 and 40 bushels to the acre are indeed very common in the county. Mr. Wm. Powell, Somonauk, had out seven acres of wheat. It looked well, and he counted on 30 bushels to the acre. He threshed it and found the yield 327 bushels—nearly 50 to the acre! Instances like this are indeed quite common all over the county."

The Maquoketa (Iowa) Sentinel of August 16, says; "Mr. George W. Bowman threshed for Mr. Seymour Day, one of our farmers, who sowed last spring twenty-four bushels of wheat upon sixteen acres of ground, and harvested 650 bushels; making just 40⅝ bushels to the acre."

The Wabashaw (Minnesota) Journal says: "The yield of wheat is so large in some localities of Minnesota, that owners of threshing machines are offering to thresh out the product of some fields for the excess over thirty bushels per acre. The usual rate is one-tenth. They are calculating on a yield of over thirty-three bushels per acre."

CORE FOR LAYING CEMENT PIPE.—A correspondent in Connecticut, Mr. LEVI S. WELLS, contributes for the Co. GENT. his experience with a new Patent Core, the use of which he thus describes:—"The acqueduct is made by using a bag or core of rubber cloth, which being inflated with air, is laid upon a coating of cement mortar in the bottom of the ditch, and then covered with mortar, and left a few moments to set; when the air is let out of the core, and it is drawn out, leaving a nicely formed acqueduct, having a caliber of one, two, or more inches—depending upon the size of the core used—then, proceeding again as before, and forming one continuous pipe without joints, of any desired length. A man with help to prepare the cement can lay from ten to twenty rods a day." He also commends this kind of pipe in very high terms—more so, in fact, than we should care to publish, except as the result of a longer and more complete trial of the pipe laid, as well as of the invention referred to.

SEEDLING PLUMS.—We have received from C. REAGLES & SON of Schenectady, specimens of a new seedling plum from the seed of the Washington. It is large, slightly oval, (rounder than its parent,) full and obtuse, yellow with carmine dots on the sunny side, flesh rather coarse, "good," and adhering strongly to the stone. On tasting it with specimens of the Washington, we think it hardly as good as the latter, yet it has hardly had a fair chance, having been sent over two hundred miles of railway. A single examination is insufficient to enable any one to decide satisfactorily on the character of a new fruit.

MORE OF MY EXPERIENCE WITH HAY CAPS.—I wish the Co. GENT. "to keep them before the people"—here are a "peculiar institution" for a wet climate or rainy weather. I have 160 caps, and no doubt but that they have paid all they cost, during this season of haying and harvesting, to say nothing of the three past years they have been in use, and the future benefit to be derived from them. If I can only get my wheat cut and set up in good order, under caps, my anxiety dwindles to nothing—if it rains, why let it rain—I generally go into the house in such weather, and read the GENT. I have had wheat under caps out in the hardest showers we have had, without being wet in the least, except around the outside at the foot of the bundles. When the caps were taken off, the heads were as bright as though no rain had fallen. One cap will cover twelve bundles snugly—but enough. J. L. R.

☞ That good will often arise out of evil, is a saying none the less true because it savors so strongly of antiquity. A New-Jersey friend and subscriber of the COUNTRY GENTLEMAN affords us an illustration quite in point. One of his neighbors, while at work with the Mowing Machine, leaves the seat to disentangle a tuft of grass from among the knives; the dinner-horn inopportunely sounds, and the horses start suddenly forward, catching and cutting off the fingers of the unfortunate man. The incident is naturally mentioned at our friend's dinner-table, and his wife at once suggests that all farther danger from this source may easily be obviated, and after some study of the machinery involved, actually designs and patents what seems to us a mode as effectual as it is simple, of rendering the occurrence of similar accidents hereafter next to impossible. This is a method of *throwing the knives out of gear the moment the driver's weight is removed from his seat.* Of course as soon as he resumes his place again, the cutting apparatus is ready for operation, and the patent taken out covers the ground of operating by means of the driver's seat—an idea, *now that it has once been thought of,* so very natural and advantageous that we can only wonder that it never before occurred to any manufacturer or owner of these machines.

It is through the unexpected movement of the horses when the driver temporarily leaves his seat, that nearly all the numerous accidents have been occasioned, of which we frequently hear through the papers in connection with the use of Mowing and Reaping Machines, and we cannot hesitate in expressing the opinion that Manufacturers owe it to their thousands of patrons at once to adopt so easy a safeguard against risk of injury, if not of loss of life. There is now time before the machines of another season are put into the market to bring about this most desirable result. Burlington, N. J., is the residence of DILWYN SMITH, who may be addressed at that Post Office upon the subject of the invention, which farmers owe to the ingenuity of his lady, MRS. ELIZABETH M. SMITH.

☞ The New-Jersey State Fair at Elizabeth, last week, appears to have been well attended, and in many respects an excellent show. The fear of exposing Cattle to some complaint which caused the death of several animals near Newark, early in the season, induced the managers to forego this part of the exhibition. The number of Entries is this year stated as follows, exclusive of the entries for special horse premiums:—

Class 1. Cattle—no entries.
Class 2. Horses—2-6 entries.
Class 3. Sheep, Swine and Poultry—37 entries.
Class 4. Farm products and Horticulture—289 entries.
Class 5. Home products—126 entries.
Class 6. Mechanical, etc., 325 entries.

This presents an aggregate of 1,133, while last year, cattle and all, the total number was scarcely 1,000.

EARLY MAY WHEAT.—The Early May wheat received last fall from the south has done remarkably well with us. It did not appear to suffer more from the changeable weather the latter part of last winter and early spring than the other varieties of wheat in this locality. It was not hurt with the fly in the least, (though the Mediterranean suffered much in places,) nor did the wheat midge destroy a single head. The straw was clean and bright, and grew about five feet high. The season of its ripening was about eight days before the Mediterranean. The grain is full and plump. Should it continue to succeed as well as last year, it would no doubt be a great acquisition to the wheat growing district, as it will ripen before the season of the wheat midge, often so destructive to other and later varieties of wheat. WILSON DENNIS. *Bucks Co., Pa.*

GRAPES ON KELLY'S ISLAND.—Grapes are a full crop here this year so far. There will be some 63 acres in bearing this year. About two-thirds Catawbas—the balance mostly Isabellas. The Delaware and Concord look remarkably well. The two seedlings, Lydia and Mottled, that Mr. Carpenter has taken premiums on the last two years at the Ohio State fairs, have improved very much this year in the size of the bunches—the Mottled has begun to turn berry two weeks earlier than the Catawba; the bunches are more compact than the Catawba, and may prove in quality fully equal to Catawba.

There has been over 100 acres set to grapes on the Island this year. There are 2,800 acres of land, and 234 of it is now set to grape-vines—average yield per acre for the last fifteen years, 600 gallons of wine. K. A.

PRODUCTIVE STRAWBERRY BED.—I have a "strawberry patch," a part of it set one year last spring, and the rest two years. It is seven feet by one hundred and fifty-three feet. I picked and sold from it the present season, 457 quarts of starwberries (or 14 bushels and 9 quarts.) Wilson's Albany is the kind, and though they require a little more sugar than some other kinds, they give you enough more fruit to pay for it. Fifty berries (selected of course) would fill a quart measure. A. S. MOSS. *Fredonia, August,* 1860.

☞ The weather on Wednesday last—the Sale day of the "Albany County Breeding Association" was extremely unpropitious—not only a constant rain, but a cold one, and neither rain nor cold in moderation, but both of that persistent and penetrating November kind, when of all times barn-yard scenery is least attractive, roads the muddiest, and fireside shelter the most enticing. A few gentlemen from a distance, who by no means anticipated so cool a greeting, and those in the neighborhood whose interest in the stock offered or friendship for its owners, was proof against storm and tempest, assembled to see what could be done under the circumstances; and, after the erection of a stove in the lunch-room had secured the comfortable partaking of that repast, clustered about under the dripping sheds to hear the auctioneer invoking vainly animation and enterprise from the shivering audience of which they were members. If the weather was *for-bidding,* it soon proved that *they* were not; and at the outset the whole would probably have been postponed, but for the desire that the non-resident part of the audience should at least have the opportunity of purchasing whatever might be called, by them or others, into the ring. Thus it came about that Mr. BATHGATE of Westchester county, purchased "Mary Blanc," a trotting mare of some note, for $300; Mr. ROBINSON of Georgia, the brood mare "Albany," for $250; GEO. CHARLES of this city, the imported Short-Horn cow, "Flattery," for $250; Mr. TROWBRIDGE of New-Jersey, the cow "Bloom," for $75, and Mr. J. V. MOORE a pair of Devon Working Cattle for $170. Subsequently the Ethan Allen brood mare, "Rose Allen," and the colt of the mare "Caroline," by American, were sold to Mr. Bathgate at private sale, the two for $500, and there may have been one or two other private sales.

Thus the majority of the stock, the chief Short-Horns, all the fine Devons offered by Capt. HILTON, and a large part of the Horses, remain to be disposed of, and the day now appointed is the 10th of October, at 11 A. M., when we hope to see a larger gathering under more favorable auspices. The Catalogues, meanwhile, are well worth the examination of all who are interested in the subject, and for the convenience of applicants we subjoin the names of the members of the Association:—William M. Bullock, Bethlehem; Joseph Hilton, New-Scotland; William H. Slingerland, Norman's Kill; William Hurst, Albany; Geo. W. Adams, Whitehall.

LARGE APPLES.—Mr. H. WETHERWAX of Sandlake, informs us that he recently picked by hand 2,250 apples (Pound Sweets) in about four hours. These apples, which included all on the trees, large and small, with the exception of half a dozen defective ones, filled nine barrels, thus averaging 250 to the barrel. One of his neighbors, Mr. J. SIPPERLY, made a selection from the largest of these apples, and found, on counting, that 170 filled a barrel.

PEACH TRADE AT ROCHESTER.—The Rochester Union estimates the amount of peaches shipped from Rochester at *sixty* tons per day. It says: "On Saturday the New-

York Central Railroad Company sent eastward as freight 2126 bushels of peaches, making seven car loads shipped here, and there were ten cars put into the train, which were loaded at points along the Niagara Falls Road, and brought into the city. Five of the seven cars shipped from this city carried peaches for a single shipper."

The Vermont State Fair opened well at Burlington last week Tuesday, with a pleasant day and numerous entries. We intended if possible, to have been present. Mechanics' and Floral Halls were well filled, and the track was open for some good trotting. Wednesday, as we learn from the Free Press, there was an extraordinarily good display of *umbrellas*, the storm experienced here having extended in that direction; Thursday, however, was bright and clear, and prospects were reported as "improving." Of Horses the entries numbered, on Wednesday, 246, divided as follows: Sherman Morgan Stallions 26, Mares 14; Woodbury Morgan Stallions, 28, Mares and Fillies 7; Bulrush Morgan Stallions 2, Mares 5; Hamiltonians and other blood 35; Matched Horses 32 pair; Geldings and Mares 78.

☞ Messrs. Ellwanger & Barry of the Mt. Hope Nurseries at Rochester, who have exhibited extensive collections of Fruit at all the principal Agricultural Shows this year, contribute a basket of fine pears for our private examination, to which we may assure them that full justice has been done in that way which we suppose to constitute the "chief end" of all Pomological specimens, however beautiful to the eye or interesting as curiosities.

The United States Fair.—An anticipated letter with regard to this Exhibition having failed to reach us, we can only gather from the newspapers, that the attendance has been tolerable, and the Show itself in some respects a fair one. The Tribune correspondent, Mr. Olcott, speaks of the fruits and flowers as finally coming out pretty well; among the cattle, there seem to have been few breeders present of much celebrity, in most of the classes, but the Herefords are spoken of as excelling all the rest. R. A. Alexander exhibited South-Down Sheep.

☞ We have been shown a new Silver Medal, struck off by Robert Lovett of New-York, for the Union Agricultural Society of Ridgeway and Shelby. It is enclosed in a neat case, also prepared by Mr. L., of an appropriate and tasteful design. The Society is entitled to much credit for providing this very appropriate testimonial for its exhibitors, and it can scarcely fail to increase their numbers.

Addison Co., Vt.—The Fair of this County was held at Middlebury on the 5th—7th September and proved a complete success. The Address was delivered by Governor Chase of Ohio, after which there was a poem by Saxe, and a speech by Hon. E. P. Walton. Among the interesting features of the exhibition was a walking match by horses. Five were entered, and the prize was awarded to "Sam. Houston"—time for half a mile, 5¾ minutes.

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The American Pomological Society.

The eighth biennial meeting of this association was commenced at Philadelphia, Sept. 11—the President, Hon. Marshall P. Wilder, in the chair. About 200 delegates were present, representing 17 States.

The morning session was occupied in perfecting the organization, the appointment of committees, &c.

In the afternoon the address of the President was, as usual, delivered.

Following the address was the report of the committee on nominations, and an election for officers of the society for the next two years, which resulted in the choice of the following ticket:

Hon. MARSHALL P. WILDER, Boston, President.
Thirty-eight Vice Presidents, one from each State and Territory of the Union.
Thomas P. James, Philadelphia, Treasurer.
Thomas W. Field, New-York, Secretary.

The place of holding their next biennial session was then taken up and debated at length. It was finally agreed to hold the next session in Boston.

ALBANY COUNTY FAIR.

There was quite a large show at the Fair of this Society last week, although by no means a general one, the number of exhibitors being small in proportion to the quantity of articles and animals exhibited. The display of stock, however, could scarcely fail to be attractive, which included such Short-Horns as Bullock, Slingerland and Hurst's; such Herefords as Corning's; such Devons as Hilton's, Whitbeck's and Conger's; Working Oxen and Steers like those of Van Wie, Booth, Loucks and Schoonmaker; such Long Wooled Sheep as Van Wie's and Soop's; South Downs like Corning's, Booth's, Bender's and Louck's, and Swine like Hurst's, Richardson's and others. There was a good lot of Poultry out, among exhibitors of which we recognize again the names of Van Wie, Booth and Hurst, together with those of of Harcourt, Wendell, White and others.

The display of Fruit was unusually good; among contributors were E. Corning, Jr., A. W. Twitchell, John G. White, Wm. Gray, John Wilson, Philip Myers, W. H. DeWitt, John Dingwall, John I. Slingerland, Peter Van Wie, and so on, representing tolerably well both city and country growers. Flowers were mostly shown by Wilson and Dingwall. There was quite an exhibition of Vegetables, and several of our Albany Implement manufacturers combined to render the display in this department an instructive and valuable one.

The Society were indebted to manufacturers and merchants in the city for a fair turn-out in the miscellaneous departments, and to the ladies for a good show of Household manufactures, needlework, bread, preserves, &c.

Gov. Seward's Arabian Horses, which reached Boston on the 11th inst., were exhibited toward the conclusion of the Fair, but we failed to see them. The Boston Cultivator remarks on this subject:—

> Instead of there having been two mares and a stallion shipped, it appears to have been just the reverse. Only one mare was shipped, and she died on the passage. The two stallions arrived in good condition, considering the necessary hardships of the voyage. One is a bay (the age not known to the writer,) the other a sorrel, four years old. The former appears to be a very strong and energetic animal, about fourteen and a half hands high, compact body, with a pretty good, though not what we are accustomed to call an Arab head, clean throat, short, but rather light neck, pretty well placed on the shoulders, deep and capacious chest, short and very strong back, wide loin, tolerably full stifle, and strong, well-placed limbs. The other did not strike us as particularly remarkable in points, though from his green age and the circumstances under which we saw him, we would not pronounce a positive opinion.

The weather was very unfavorable except toward the conclusion of the Show, and the Managers state in general terms that the receipts were "unsatisfactory." Notwithstanding the rain and mud, however, we were surprised to see so many in attendance on both days when we visited the grounds.

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Rutland Co., Vt.—The Fair, held on the 6th and 7th, proved to be all that its friends could have desired. The attendance was large, the receipts amounting to $1.250. The Address was delivered by Hon. L. Chandler Ball of Rensselaer Co., Among the "attractions" was a balloon ascension by Prof. La Mountain, accompanied by a lady. On one of the evenings a "levee" was held, at which a succession of pertinent and happy speeches were made by Ex. Gov. Dyer of Rhode Island, Ex. Gov. Fletcher of Vermont, the Rev. Mr. Balch, and by Messrs. B. F. Winslow of Pittsford, and Charles E. Graves of Rutland. A poem "Humbug," was also read by Mr. Egbert Phelps of Middlebury.

Great Yield of Wheat.—Jesse R. Yeomans of Indiana, writes to the Parke county paper that he has raised three acres of wheat this year which averaged sixty-four bushels and ten pounds to the acre.

CHEAP BULBOUS ROOTS, PÆONIES, ETC.

Wm. R. Prince & Co, Flushing, N. Y.,

Having a surplus of over 100,000 Bulbs, will supply them at lower rates than ever before offered. Applicants can send lists to be priced at the lowest rates, which will be returned by first mail. The new and extensive Catalogue of Bulbs just published, will be sent, and the Wholesale Catalogue when desired. Sept. 6–w&m1t.

LOP-EARED RABBITS.—

A few pair of young Lop-eared Rabbits may be had by application to the subscriber. Also

FANCY PIGEONS.

Carriers, Fantails, Pouters, Ruffienecks and Tumblers. Prices from two to five dollars per pair.

C. N. BEMENT,
Springside, Po'keepsie, N. Y.

Aug. 30—w1tm1t.

STRAWBERRIES.—

50,000 Wilson's Albany at $4 per 1000; 10,000 Jenny Lind at $6 per 1000. Carefully packed in moss, and shipped as directed.

Aug. 30—w8tm2t. D. S. HEFFRON, Utica, N. Y.

BERKSHIRE SWINE FOR SALE—

AND A FEW

SOUTH DOWN SHEEP.

Sept. 20—w&m1t* EDWARD WAIT, Walden, Orange Co., N. Y.

KIRTLAND RASPBERRY.—

The subscriber is now prepared to fill either large or small orders for plants of this truly valuable red Raspberry, which has proved so hardy and productive wherever cultivated, as to entitle it to the very front rank as a market variety. It needs no protection in winter, bears profusely, is of fine flavor, and will produce a second crop of fruit in the fall. Price of plants $8 per 100, $20 per 1000. Also Lawton Blackberries, $5 per 100, $40 per 1000.

Sept. 20—w4tm1t. H. B. LUM, Sandusky, Ohio.

CRANBERRY PLANTS—BELL VARIETY.

We have always sold genuine plants at less prices than any other grower.

New Rochelle (or Lawton Blackberry,) at greatly reduced prices.

Hop Tree—very ornamental, and better for family use than the common hops.

Also, Hartford Prolific Grape, Early Hardy Prolific, and an excellent Wine Grape.

Concord Grape.

Bagley's Everbearing Raspberry.

All the above for sale in quantities, at lowest reduced prices.

Our Catalogue of prices, with Circular for the culture, soil and prices of Cranberry and Blackberry Plants, and Hop Trees, will be forwarded to applicants by enclosing a postage stamp to the New-Haven Nursery.

F. TROWBRIDGE & CO.
New-Haven, Conn.

Sept. 13—w2tm1t.

GRAPES! GRAPES!! GRAPES!!!

Twenty varieties of the best hardy sorts for sale singly or by the hundred. Send stamp for priced Descriptive Circular.

Aug. 30—w8tm2t. D. S. HEFFRON, Utica N. Y.

LAWTON BLACKBERRY.—

To obtain the original variety for field or garden culture, address WM. LAWTON, New Rochelle, N. Y.

☞ Circulars, with ample directions, will be forwarded to all applicants, free. Aug. 1—m1t.

SCHENECTADY AGRICULTURAL WORKS.

The proprietors of these works are now prepared to fill orders for their well known

Patent Horse-Powers, Threshing Machines, &c.,

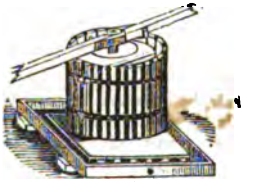
and invite the attention of the public to them.

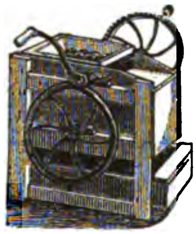
Important improvements have been made since the last season, which it is hoped will add to the already unequalled reputation of their machines.

To their former list of machinery they have added

Males' Patent Convertible Cider Mill and Corn Sheller,

shown in the cuts. It is simple, efficient, and durable, possessing the advantage over cider mills in common use, of being an excellent corn sheller, and its price no more than cider mills are usually sold for.





Important improvements in their Clover Huller and Cleaner have made it one of the very best in use. The following letter will give some idea of its capacity, when well managed in good clover.

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G. W. & Co.—I have never written you anything about the clover machine since I got it. It gave good satisfaction. I rubbed and cleaned over 200 bushels, and it worked very nicely, doing the work well. I rubbed three bushels clean seed in 40 minutes, and could do from 15 to 23 bushels per day. I did for one man 34 bushels in less than two days. VOLNEY BELKNAP.

A circular containing descriptions and price list of machines manufactured at these works, will be mailed to all applicants. Address

G. WESTINGHOUSE & CO., Schenectady, N. Y.

Sept 27—w4t.m1t.

GRAPEVINES! GRAPEVINES!

Large stock of the most desirable sorts. Send for a Catalogue.

The subscribers offer for sale a large and well grown stock of GRAPEVINES at reduced prices, consisting of the following, and other good sorts, all propagated from genuine stock: Delaware, Diana, Concord, Hartford Prolific, Rebecca, Union Village, Anna, Logan, Oporto, &c. Also the older sorts, such as Isabella, Clinton, Catawba, and Forsyth. Sort for culture under glass, of best sorts. Two hundred acres of FRUIT TREES in large or small quantities. Greenhouse Plants, Hardy Border Plants, Bulbous Roots, Roses and Dahlias in great variety, Hedge Plants, Strawberry Plants, Raspberry of Everbearing, and other good sorts. Address

W. T. & E. SMITH,
Geneva Nursery, Geneva, N. Y.

Sept. 1—w&m2mos.

WM. R. PRINCE & CO.,

FLUSHING, N. Y.

Offer a more extensive and perfect collection in each Department of their business than ever before.

The following Catalogues will be sent to applicants who enclose stamps.

No. 1.—Catalogue of Fruit and Ornamental Trees and Shrubs, and all Small Fruits.

No. 2—Catalogue of Roses and Flowering Plants, including Carnations, Chrysanthemums, Phlox, Iris, &c.

No. 4—General Wholesale Price List for Nurseries.

No. 5—Wholesale Price List of Vegetable and Tree Seeds.

No. 6—Descriptive Catalogue of 160 Varieties of Strawberries.

No. 8—Wholesale Catalogue of Native and Foreign Grapes.

No. 9—Catalogue of Bulbous Flowers, Tree and Herbaceous Peonies, Dahlias, Primroses, Polyanthus, Auriculas, Cowslips, &c.

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Orders are executed and packed in a superior manner, forwarded according to instructions, and a transportation receipt mailed to the purchaser with the invoice. Sept. 6—w&m1t.

GREAT AUSTIN SHAKER SEEDLING STRAWBERRY.

THE LARGEST STRAWBERRY IN THE WORLD.

Amateurs consider this seedling the greatest acquisition to our small fruits ever introduced. A monster in size, wonderfully prolific, and of the finest flavor. We are now prepared to take orders to commence delivering plants in August in rotation as ordered. Address either

CHAUNCEY MILLER, Albany N. Y., Shaker Trustee,
Or WM. S. CARPENTER, 468 Pearl St., N. Y.

WE OFFER THE FOLLOWING CERTIFICATE.

We, the undersigned, having ordered largely of the AUSTIN SEEDLING in May last, with the assurance that our money would be refunded if not satisfied, after seeing the fruit beg leave to report, that we have visited Watervliet, the Shaker settlement, where the Austin is now fruiting. We found it growing in the most common way, in masses, and not in hills, without any particular care, and much injured by the drouth; yet the great productiveness and uniform large size and fine flavor, induces us to consider the AUSTIN as one of the best varieties in cultivation, and a great acquisition to our small fruits. We found the AUSTIN averaging larger than the Wilson's Albany, and about as productive; and from appearances will continue to fruit until the middle of July.

JOHN C. THOMPSON, Tompkinsville, Staten Is., N. Y.,
JAMES L. LOCKWOOD, Stamford, Ct.,
EDWARD BISHOP, Stamford, Ct.

Aug. 23—w6tm2t.

STEEL PLOWS.—

We are manufacturing for the spring trade large numbers of our Mohawk Valley Clipper Plows with steel mold-board and land-side, with steel or cast point, as desired, and would refer you to the following persons, who have them in use:

John Johnston, Geneva, N. Y.
J. Ingersoll, Ilion, N. Y.
Wm. Summer, Pomaria, S. C.
R. C. Ellis, Lyons, N. Y.
Col. A. J. Summer, Long Swamp, Florida.
A. J. Bowman, Utica, N. Y.
A. Bradley, Mankato, Minnesota.
F. Mackie, Utica, N. Y.

We are also manufacturing Sayre's Patent Horse Hoe and Potato Covering Machine, Sayre's Patent Cultivator Teeth in quantities for the trade; and all kinds of steel and swage work in the agricultural line. Send for a circular.

SAYRE & REMINGTON.
Union Agricultural Works, Utica, N. Y.

Jan. 26—wtf Mar. 1—mtf.

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EXTRAORDINARY OFFER!

THREE MONTHS FOR NOTHING!!

This old and popular Agricultural and Horticultural Journal is published at Rochester, N. Y., in the very heart of one of the best wheat and fruit districts in America. It has hundreds of practical and experienced correspondents in all parts of the United States and Canada. It aims to be the "Farmers' Own Paper." In its pages the farmers and fruit-growers of all sections interchange their views and record their experience. It costs only FIFTY CENTS A YEAR, and all who subscribe at this time will receive the remaining numbers of this year FREE.

Fifteen Months for Half a Dollar!

Send the Fifty Cents in stamps to JOSEPH HARRIS, Rochester, N. Y., or get one of your neighbors to join, and send a dollar bill.

Sept. 20—w4tm1t.

DOWNING'S FRUIT AND FRUIT TREES

Just Published, and for Sale at this Office—sent by mail, post paid, at $1.75.

THE ILLUSTRATED ANNUAL REGISTER OF RURAL AFFAIRS,

1861.

THE SEVENTH NUMBER of this attractive and useful Work is now nearly ready for the Press. We hope to have it out some weeks earlier than usual, and are now prepared to receive orders for single numbers or in quantity, which will be filled as soon as the REGISTER for 1861 is issued. The attention of OFFICERS OF AGRICULTURAL SOCIETIES and others who propose attending Town, County or State Fairs this Fall is particularly requested to the ready Sale which may be had for the REGISTER during these anniversaries, and on other occasions, from the First of September even until another spring. TERMS—as heretofore: SINGLE COPIES, postpaid, TWENTY-FIVE CENTS; ONE DOZEN COPIES, postpaid, TWO DOLLARS; ONE HUNDRED COPIES, FIFTEEN DOLLARS, and larger quantities at a farther reduction.

PARTIAL ABSTRACT OF CONTENTS.

Among other valuable chapters, the ANNUAL REGISTER for 1861 will contain the following:—

I. WORKING MEN'S COTTAGES—Seventeen Engravings.
  1. Important Advantages of their Erection.
  2. Design for a Cottage of the Smallest Size.
  3. Design for a Cottage on a somewhat Larger Scale.
  4. Design for a Cottage of better class or for a small Farm House.
  5. Design for a somewhat more costly Cottage.
  6. A Design by L. B. Valk.
  7. A Design by J. M. Wade, with modifications.

II. LAYING OUT GROUNDS—Five Engravings.
  1. Plan of a Village Half Acre Garden.
  2. Simple but Graceful Arrangement of Pleasure Grounds.
  3. Laying out a Western Farm.

III. PRUNING AND TRAINING ROSES—Eleven Engravings.
  1. Tree Roses; two modes with figures.
  2. Weeping Roses.
  3. Pillar Roses.

IV. NEW FRUITS AND POMOLOGICAL NOTICES—Twenty-one Engravings.
  1. Basket of Plums—Descriptions and Figures of 15 newer Sorts.
  2. Notes on Strawberries—Results of the Farther Experience of the Year.
  3. Pruning Dwarf Pears.
  4. Accurate Portrait of a Dwarf Pear Tree in Bearing.
  5. How to Obtain Fruit in New Places.

V. STRUCTURES FOR GREEN HOUSE PLANTS—Ten Engravings.
  1. Construction and Management of the Cold Pit.
  2. The Conservative Pit.
  3. Ward's Cases.
  4. The Window Case and Aquarium.
  5. Translucent Paint for Glass.

VI. DOMESTIC POULTRY—Thirty-three Engravings.
  1. Origin of Domestic Fowls.
  2. Descriptions at Length of the Different Breeds.
  3. Management of Poultry.
  4. Five Designs for Poultry Houses.
  5. Nests, Pens, Coops, Feeding Hoppers, &c.
  6. Diseases of Poultry.

VII. WEEDS AND THEIR DESTRUCTION—Twenty-one Engravings.
  1. General Rules for their Prevention and Extirpation.
  2. Annual and Biennial Weeds.
  3. Simple Perennial Weeds.
  4. Creeping Perennial Weeds.
  5. Noxious and Intruding Shrubs.

VIII. FILTERS, AND FILTERING CISTERNS—Five Engravings.
  1. Construction of Portable Filters.
  2. Another Plan for the Same.
  3. Filters attached to the Cistern.

IX. AGRICULTURAL NOTES.

X. HORTICULTURAL NOTES.

XI. RURAL MISCELLANY.

XII. DOMESTIC ECONOMY, &c., &c.

XIII. ADVERTISEMENTS

This, preceeded by the usual Calendar pages and Astronomical Calculations, forms a book which is certainly cheap at its retail price, while the Publishers may especially call attention to the pithy and appropriate HINTS FOR THE MONTH which appear upon the Calendar pages, as embracing in the most concise form many valuable suggestions—to the article on WORKING MEN'S COTTAGES, for the neat and useful Designs it contains—to those upon ROSES and GREEN HOUSE Structures for their beautiful illustrations—to that upon POULTRY as the most complete chapter upon the subject yet presented in equal space, accompanied as it is by so many Engravings—and to that upon WEEDS and their Destruction, as presenting just the information which every Farmer requires, with cuts by which he can compare the most common and troublesome of these intruders, and appropriate practical directions how to get rid of them.

THE PUBLISHERS, with the view of rendering the circulation of the ANNUAL REGISTER for 1861, still wider and larger than that of any previous Number, are prepared, as above intimated, to offer the most liberal Terms for its introduction in quantities, either to Agents, Agricultural Societies, Nurserymen, Dealers in Implements and Seeds, or any others who take an interest in the dissemination of useful reading, and in the promotion of Rural Improvement.

Address all orders or inquiries to the publishers,

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ALBANY, N. Y.

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As the season for planting out beds of Strawberries again returns, one naturally asks himself the question, what variety shall I plant? Our answer in all cases is, "Wilson's Albany." Price of plants per 100, $1; per 1000, $8. A liberal discount to the trade. Packing, for which no charge is make, guaranteed extra. Send your orders for the same to the Albany Nursery of JOHN WILSON,

July 12—w12t. Albany, N. Y.

PREMIUM STRAWBERRIES.

Wm. R. Prince & Co., Flushing, N. Y.,

Will supply 250,000 Strawberries, comprising 160 varieties, this collection far surpassing any other in this country or in Europe, and 75 of the New Varieties are in no other Nursery. Prince's Scarlet Magnate, the heaviest of all, and Hooker, $1 per 100, $7.50 per 1000. Wilson & Hovey $1 per 100, $6 per 1000. Jenny Lind, Coppock's No. 1, Imperial Scarlet, Victoria, Triumph de Gand, Myatt's Eliza, $1.50 per 100. Cutter's Seedling, Chilian Eclipse, Globose Scarlet, Boyden's Mammoth, Voorhis Queen, Le Baron, Jessie Read, Diadem and Bartlett, $2 per 100. Burr's Pine, Early Scarlet, Hudson, Bartlett, Longworth's Prolific, McAvoy's Superior and No. 1, $1 per 100 and $5 to $7 per 100. Austin's Shaker, $3 per dozen. Downing's Prolific and Filmore, $1 per dozen, and 130 other varieties at $1 to $2 per 100, and $5 to $10 per 1000. A Descriptive Priced Catalogue sent to applicants who enclose stamps. Plants will also be furnished by the dozen.

Sept. 6—w&m1t.

I. T. GRANT & CO., PATENT GRAIN CRADLE.

They are so improved as to be taken down and packed in boxes for transportation. One dozen can be packed in a box of about six cubic feet. We also make the Grapevine Cradle. All of the above are made of the best material and workmanship. For Price List, address

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CORNER CLINTON AVENUE AND KNOX STREET, ALBANY, N. Y.

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Jan. 5—wtf.—Feb 1—mtf. Albany, N. Y.

I. T. GRANT'S PATENT DOUBLE BLAST FAN MILLS.

They will chaff and screen wheat in passing through the mill once, in the most perfect manner, and all kinds of grain and seed. Warranted the very best in use.

Patent Rights for sale of all the Western States.

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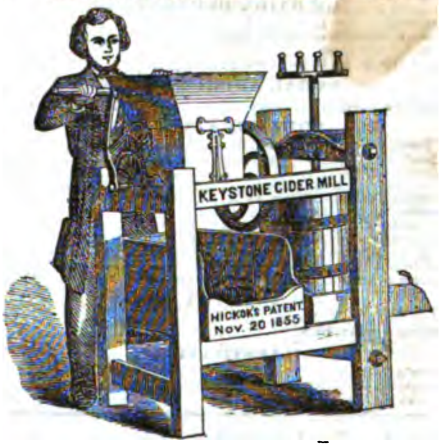

This admirable machine is now ready for the fruit harvest of 1860 It is if possible made better than ever before, and well worthy the attention of all farmers wanting such machines.

It has no superior in the market, and is the only mill that will properly grind Grapes Price $40. For sale by all respectable dealers.

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PLUM TREES! PLUM TREES!!

400,000.

Particular attention is invited to our Plum Trees, of which we have a full supply, comprising the leading and most desirable varieties.

	Per 100.	Per 1000.
Plum Trees, 1 year budded, 3 to 4 feet,......	$20	$190
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40,000 Pear Trees, standards, one year budded, 3 to 4 feet, $15 per 100, $125 per 1000. Pear trees must be removed this fall. Address

C. REAGLES & SON,
Aug. 16—w8t. Schenectady, N. Y.

FRESH AND GENUINE GARDEN SEEDS,

in every variety, grown with the greatest care, and warranted true to name. The trade supplied in any quantity, either in small packets for retailing or in bulk.

PASCHALL MORRIS,
Seed Warehouse, 7th and Market, Philadelphia.
Branch House, MORTON MORRIS,
Osterman's Building, Strand, Galveston, Texas. Aug. 23—w13t.

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TO LET.—A FARM in the town of Moreau, Saratoga county, of about 500 acres, 200 of which are in wood—with a large and convenient house and all necessary outbuildings, including four barns. It is situated on the bank of the Hudson river, within one mile of the village of Fort Edward, and five of the village of Glens Falls. The station house of the Saratoga and Whitehall railroad is on the premises—thus affording every facility for market. To a person of sufficient means to stock the farm, and who will have some pride in keeping it in good order, favorable terms will be given. Address the subscriber at Moreau Station. W. H. WARREN.
Sept. 26—weow6tm3t.

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The Cost of Draining Reduced One-Half

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CALLANAN'S DITCH DIGGER AND SUBSOILER.

PRICE, with wheels, axle-tree and reversable tongues, $50. Satisfaction warranted. Also SHOVELS, made expressly to be used in connection with the Ditcher—just the thing—Price $1.50.
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10,000 New Rochelle Blackberry. Gooseberies, Currants, Raspberries, Grapes—new and old.
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A large collection of Strawberries, including "WIZARD OF THE NORTH," believed to be the most magnificent berry ever raised. Specimens have measured nine inches around, and of good quality. Imported by E. Y. Teas, Richmond, and for sale in America only by him and myself.
100,000 Evergreens, American and European, mostly small and suitable for nurseries.
Ornamental Trees, Shrubs, Vines, Roses, Hardy and Green-house Plants, Bulbs, &c., WHOLESALE AND RETAIL at lowest rates.
Priced Lists on application. JOHN C. TEAS.
Oct. 4—w2tm1t. Raysville, Henry Co., Ind.

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Sept 27—w8t.* H. W. ROGERS, Baltimore, Md.

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Sept. 27—weow4t. GEORGE W. CAMPBELL, Delaware, Ohio.

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Elizabethtown, N. J.,
Offers for sale this autumn a general assortment of all the various kinds of hardy

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Trees securely packed and forwarded to all parts of the United States.

Orders by mail or left at the Nursery will receive prompt attention.
Sept, 27—w2t.

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B. K. BLISS,
Seedsman and Florist, Springfield, Mass.,

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The collection comprises all the most desirable varieties of
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TULIPS, Double and Single, Early and Late.
CROCUS, all of the old, and many new varieties.
CROWN IMPERIALS.
POLYANTHUS NARCISSUS.
DOUBLE ROMAN AND PAPER WHITE NARCISSUS.
TRITONIAS.
JONQUILS, Double and Single.
JAPAN LILIES.
RANUNCULUS.
ANEMONES.
ARUM.
SNOW-DROPS.
IRIS.
GRAPE AND MUSK HYACINTHS, etc.
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20 DOUBLE AND SINGLE HYACINTHS, (all named flowers,) suitable for Culture in Glasses or Pots.
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20 EARLY DOUBLE AND SINGLE TULIPS, for Pot Culture or the open Border.
20 LATE TULIPS, for the open Border.
6 POLYANTHUS NARCISSUS, for Pot Culture or Border.
6 DOUBLE ROMAN NARCISSUS, very fragrant.
2 CROWN IMPERIALS.
12 DOUBLE JONQUILS.
100 CROCUS, finest mixed.
2 DIELYTRA SPECTABILIS, large roots.
4 PÆONIES, all distinct varieties.

Collection No. 2—Price $5—Contains
ONE HALF OF EACH of the above varieties, with the exception of the Pæonies.
All orders from unknown correspondents must be accompanied with the cash, or a satisfactory reference. Address B. K. BLISS.
Sept. 27—w4t. Springfield, Mass.

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Sept. 20—w&mtf. WM. J. PETTEE, Lakeville, Conn.

THE CULTIVATOR.

THIRD] TO IMPROVE THE SOIL AND THE MIND. [SERIES.

VOL. VIII. ALBANY, N. Y., NOVEMBER, 1860. No. 11.

PUBLISHED BY LUTHER TUCKER & SON,
EDITORS AND PROPRIETORS, 395 BROADWAY, ALBANY, N. Y.

J. J. THOMAS, ASSOCIATE EDITOR, UNION SPRINGS, N. Y.

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IMPROVED FARMING NEEDFUL.

The fact that the soil may be largely exhausted of its elements of fertility and in a measure worn out, will scarcely be disputed while there are so many farms which have come, by long and improvident culture, to give less and less return of crops, year after year. Nor will it be denied that our best land can be over-cropped and mismanaged, for it is well known that much of this comparatively sterile land was once richly productive, giving for many years, without manures or careful culture, very large and profitable crops. It has been found that the best soils, if long cultivated in grain, without being in meadow or pasture at times, or receiving periodical dressings of manure, must thus wear out—must become more or less sterile from exhaustion—for every crop grown and removed, carries with it portions of the supply of food for vegetable growth therein contained. The elements thus abstracted are found to be indispensable, and must be restored to the soil, in some way, before it can regain its former productiveness.

We hope few of our readers have to contend with the difficulties of these "worn-out farms,"—and they will be less inclined to think so, while harvesting the bounteous crops of the present season, than ever before—yet we know that many possess those which are not as productive as they have been, and hence we believe improved farming needful, as our caption declares—believe that the means of restoring and improving their fertility and productiveness is a matter of interest to individual land owners as well as the public at large. Private prosperity makes up, and is at the foundation of national prosperity, and especially is this applicable to the condition of the farmer. Any plan by which the average yield of any of the great agricultural products of this State could be increased even a few bushels per acre, would add milions to the aggregate wealth of the State. An increase above the full cost of production, it should be remembered, counts as clear profit to the producer. That such an increased yield is very possible—that it is very easily attainable even—any one who is acquainted with the general farming of the country will readily believe. Such men have declared it as their firm and carefully grounded opinion, that were the course of cultivation—of manuring and management—pursued by our best farmers generally folllowed, the average yield, per acre, of all our staple crops could be increased *one-fourth* throughout the State, within three years after such general adoption of the improved methods of farm management.

We have spoken and shall continue to speak of the means which may be employed in restoring, keeping up, and increasing the fertility of the soil. Animal and vegetable manures and composts form the basis, with which the stimulating mineral fertilizers may be employed, and these, with thorough drainage and subsoiling, are ready means in the hands of those whose resources enable them to use the more costly and really most profitable means of improvement. Those who are differently situated—and to them we would address more particularly our concluding remarks—who make but little manure and are illy supplied with the raw material for composts—who have no means for the purchase of costly fertilizers or the carrying out of extensive improvements, must turn their attention to equally effective though much less rapid means of restoration; the growing and plowing in of green crops. In this way, aided by the fertilizers which every farmer may command, worn-out soils have often been restored to comparative fertility, and good soils have been kept good for many years, as for instance, in the rotation of wheat and clover, so long and successfully followed in Onondaga county, as recently stated in our extract from Mr. Geddes' Report. (Co. GENT., Sept. 13, 1860.)

On a badly worn-out soil, however, clover will not grow, even with plaster, if it has been freely applied heretofore, without an additional dressing of barnyard manure, or at least will produce but a light crop, but on most soils this proves a cheap and efficient application. Buckwheat is often successfully employed in the first named cases, and sometimes rye and various other green crops are plowed under to increase the vegetable matter in the soil. Were it our case, we should make a strong effort to produce clover if the land was suited to it; if not, other grasses. Heeding the caution, "don't attempt too much," we would begin gradually according to the means possessed, and go forward thoroughly with the work, manuring no more land than can be manured well, and plowing none that cannot be left richer than before. The greater part of the manure should be devoted to the production of grass and corn, to be fed out on the farm, and thus increase the supply of fertilizing material. When we have the soil filled with the roots of clover, or thickly turfed with grass, we have a store of vegetable matter to plow under which will enable us to produce another and more valuable crop.

Deep plowing will often work wonders on these "worn-out" farms. In many cases it is only the surface soil which has been used and exhausted; a few inches below lies another farm which has never been worked, and which only needs turning up to the sun to prove its power to grow valuable crops. In other cases the soil is shallow because it is full of stagnant water, making it cold and lifeless, and unfitted for the growth of grain or grass. Drainage is the potent remedy for this evil—it gives life and power to the soil; when the cold water flows off the warm air follows—it aerates, deepens and changes the very nature of the soil as regards its value for the purposes of the farmer. The means of improvement here, and formerly indicated, including a well adapted course of cropping and culture, will increase the fertility of any soil however impoverished—increase it, at least so as to furnish the means of more extensive and increasingly thorough renovation. No one who carefully reads a reliable agricultural journal, can be at a loss for plans by which he can increase the profit of his labor, and it is one great object of our care to keep before the people the fact that improved farming is both needful and possible, as well as by far the most profitable.

FARMERS' DAGUERREOTYPES.

Every one desires his photograph, and millions are annually taken by the many artists who abound throughout the country, for the gratification of the many friends of every individual. They are mostly enclosed in neat morocco cases, instead of being hung up to view, and packed away in drawers, or deposited in piles upon library and parlor tables. But there is another kind of daguerreotype, which farmers present of themselves, in a much more public manner, so as to be seen by every traveller that passes the railway or public road. They do not represent the farmer's face, but his character. They exhibit to every one, his ability as a cultivator, his taste for neatness and order, and in some degree his moral character, so far as this is exhibited by a conscientious regard for the comfort of his domestic animals, and for the welfare and happiness of his children. In short, every landowner or country resident is in some degree pictured by the external appearance of his premises. There may be some exceptions,—resulting from sickness, or from early progress, commenced with nothing, or new and unfinished homes,—but these exceptions do not destroy the general rule.

During a recent journey through some of the Western States, we saw thousands of these daguerreotypes. Some of them presented pleasing thrifty characters, in neat, well built, well kept houses, surrounded with handsome door-yard scenery, well planted shrubbery, well cultivated gardens, and painted or whitewashed farm-buildings, in perfect order. The door-yards were not encumbered with tall grass, nor the garden and farm fences with tall weeds. The owners had evidently spent the spare time, occupied by some at grog shops, or in idleness, in these various improvements, to make home comfortable for their families and attractive to their children. These pictures of character were examined and dwelt upon with much pleasure.

But there were other daguerreotypes,—very numerous,—and not quite so pleasing in kind. They were of all grades, from such as nearly approach those already described, down to the wretched, shattered, broken-windowed, thistle-grown, dirt-infested dwelling. Very few were as good as the former, and few as bad as the latter. Most had at least a few objectionable features—we observed but very few places that did not contain one or more of the following characteristics, not to be found on the very best and well kept premises:—

1. Houses with broken windows,—sometimes with old hats or rags thrust in to keep out the weather, but usually with free ventilation.
2. Houses with unfinished chimneys, and with brick and mortar lying on the roof.
3. Houses, with loose clapboards, some of which have been knocked off, and others hanging by a single nail.
4. Door-yards rooted up by pigs, the latter having free access, for the convenience of ready feeding with kitchen slops.
5. Door-yards grown up with burdocks and thistles, with a few scattered half dead fruit trees surrounded with suckers.
6. Door-yards with scattered boards, uncorded wood, old barrels and boxes, and slop puddles.
7. Broken-back barns, that is, with the roof deeply bent down in the middle,—shingles partly off,—boards occasionally off the sides, or hanging at one end by nails.
8. Barns with the doors off the hinges, and propped with rails.
9. Barns with large piles of manure against the side boards; and wagons, harrows, and plows scattered about the yard.
10. Orchards with dead limbs, broken branches, and abundance of suckers and coarse weeds about the foot of the trunks.
11. Piles of apple brush thrown along fences, and plentifully invested with thistles, mulleins, and burdocks—the fences often half down with many scattered rails in every variety of position.
12. Fences lined and nearly hid with tall nettles and elder bushes.
13. Board fences with posts set very shallow, and leaning at various angles of inclination—sometimes propped with stakes—boards occasionally knocked off, or hanging at one end.
14. Pastures in thin or partly cut woods, or in newly cleared land, with many decaying piles of brush, and a luxuriant growth of thistles, iron-weed, and poke.
15. Pastures innumerable filled with a dense growth of ambrosia or rag-weed.
16. Wet pastures, poached while wet with the feet of cattle into rough knobs, and grown up with coarse grass and smart-weed.
17. Cornfields with a dense undergrowth of weeds, and potato fields with a dense overgrowth of the same.
18. Plowed fields with wet patches or unplowed portions, the latter variously covered with coarse grass, weeds, and bushes.
19. Cows running at large in the streets, dropping their manure in the most inconvenient places, and thrusting their heads through poor fences into neighbors' cabbages and cornfields.
20. Attempts at hedging made by carelessly and irregularly setting out plants in unprepared ground, never cutting, and allowing the line to become covered with weeds and grass.

These results will always take place when the owners forget that the price of neatness and success is eternal vigilance—and that the original curse of "thorns and thistles" is intended to be converted to a blessing by inducing industry, enterprise, and the cultivation of the vigorous virtues.

We are glad to say that very many farms were nearly free from these blemishes, often not more than one or two to be seen at a time, and we are informed that they are rapidly decreasing and disappearing before the intelligence and spirit of enterprise which agricultural societies and periodicals have done so much to foster.

EDITORIAL CORRESPONDENCE.

The Elmira Meeting of the N. Y. State Ag. Society.

ELMIRA, October 6.

Amidst the pressure of other duties, I snatch an odd half hour to place on record the general features of this Exhibition. The week opened with rains on Monday, continuing until Tuesday P. M.; while the gleams of sunshine through that afternoon and Wednesday, and on Thursday morning, were at best but dull and evanescent, and gave way about noon on the last mentioned day to drenching showers—at night breaking away it is true, but followed yesterday (Friday) by a close foggy morning. Later in the day, we had farther sunshine, and the address was delivered and premiums paid under brighter skies, although in a freshening wind; and this (Saturday) morning is the only day of the week which has not toned down our morning salutations into the same foggy expression of uncertain hope and fear, which seems natural to the weather in this portion of the valley of the Chemung.

So much for the weather. In the character of the Show, there are several features which place it above mediocrity; and there are none, of which, after due allowance for locality and other retarding circumstances, we need hesitate to speak with entire sincerity. Of the Improved Breeds of Animals, the Short-Horns and Herefords were very *well*, and the Alderneys fairly, although not very largely represented; the Devons and Ayrshires, particularly the latter, were quite deficient; the show of Grade stock, which is always one of interest in the lessons it imparts, was quite full, although I am unable to say how it compares with that at Albany; of Working and Fat Cattle we perhaps had nearly the average turn-out; from a good judge I learned that the exhibition of Horses was better than at Syracuse two years ago, while it must be confessed that neither in general merits, nor by including any prominent celebrities, did it present the claims which this department has sometimes had upon our notice and admiration. The Sheep in several classes I think have never been surpassed in excellence, whatever may be true with regard to numbers. The show of Swine and Poultry was quite a good one.

With regard to the other departments of the exhibition, our associate, J. J. THOMAS, who has just returned from his western tour in improved health and spirits, was able to devote a day or two to their examination, the results of which will be found upon another page of this Number. It will be observed that Fruits and Implements are both entitled to rank among the strong points in the Show. With the decoration of Floral Hall, for which we are indebted to the Local Committee and the assistance of Col. FROST, the Superintendent, I was much pleased, although considerably more simple than has often been the case; there were just enough of the evergreen festoons to impart something of grace and airiness to the whole, without rendering it, as this kind of decoration often does, too dark and heavy to be either convenient or appropriate. The Plowing Match went off well under the direction of Supt. CARPENTER, upon a piece of land excellently adapted for the purpose, the use of which must have been granted us by the owner at some personal inconvenience and is therefore worthy of particular acknowledgment.

There is one farther feature in the week's doings which I cannot omit to mention particularly—the Evening Discussions. During the three evenings of the Exhibition, the best apartment that could be obtained for the purpose was crowded with eager speakers and listeners, and while the room occupied might have been both larger and more comfortable, we had renewed evidence that this interchange of experience and opinion is coming to be one of the real attractions of our Annual Autumn Meetings. It is with great pleasure that I acknowledge the courtesy shown by my friend, JOSEPH HARRIS of the *Genesee Farmer*, in permitting me to avail myself of his full and judicious Notes of what was said and done during Tuesday evening; this report as kindly written out by him for the COUNTRY GENTLEMAN appears in another column, and I am promised in season for next week, a similar account of the proceedings Thursday night. Mr. THOMAS' Notes of Wednesday evening, are also given elsewhere, and there is no part of the history of the Exhibition which will be of more enduring interest or more general value..

I subjoin a full list of the Premiums awarded on Cattle, Sheep and Swine:—

Class 1.—Cattle.

SHORT-HORNS—BULLS.

Best Bull, 3 years old and upwards, Cooper Sayre, Phelps,	$25 and S. Medal to Breeder.
2d do do A. F. Wood, Woodville,	15
3d do do A. M. Underhill, Poughk'psie,	5
Best Bull, 2 years old, Abram Myers, Throopsville,	20
2d do do A. M. Underhill,	10
3d do do T. L. Harison, Morley, St. Lawrence Co.,	5
Best Bull, 1 year old, J. B. Garritt, Salina,	15
2d do do A. B. Benham, Dryden, Tompkins Co.,	10
3d do do J. C. Garritt, Salina,	5
Best Bull Calf, James O. Sheldon, Geneva, "Duke of Geneva,"	5
2d do do do "Coronet,"	Trans. and 3

SHORT-HORNS—BULLS, (Imported.)

Best Bull, 3 years old and upwards, James O. Sheldon, "Grand Duke of Oxford,"	$25

SHORT-HORNS—COWS.

Best Cow, 3 years old and upwards, James O. Sheldon, "Midge,"	$25 and S. Medal to Breeder.
2d do do J. O. Sheldon, "Oxford 20th"	15
3d do do E. Cornell, Ithaca, "Lucy Ann,"	5
Best Heifer, 2 years old, John R. Page, Sennett	20
2d do do E. Cornell, "Bright Eyes 7th,"	10
3d do do J. C. Garritt, "Diana,"	5
Best Heifer, 1 year old, Jas. O. Sheldon, "Dane of Oxford,"	15
2d do do E. Cornell, "Rosamonde,"	10
3d do do do "Mignonette,"	5
Best Heifer Calf, Jas. O. Sheldon, "Pride of the Spring,"	5
2d do do E. Cornell, "Lucinda,"	Trans. and 3

SHORT-HORNS—COWS, (Imported.)

Best Cow, 3 years old and upwards, John R. Page,	$25

DEVONS—BULLS.

Best Bull, 3 years old and upwards, Ezra Cornell, Ithaca,	$25 and S. Medal to Breeder.
Best Bull, 2 years old, D. M. Lindsy, Caton, Steuben Co.,	$20
2d do do S. W. Johnson, Ellicotville,	10
3d do do S. W. Johnson,	5
Best Bull, 1 year old, A. B. Cornell, Ithaca,	15
Best Bull calf, Enoch Ottley, Phelps,	5
2d do S. W. Bradley, Olean,	3
3d do Clark Hyatt, Owego,	V. T.

DEVONS—COWS.

Best Cow, 3 years old and upwards, S. W. Bradley, Olean,	$25 and S. Medal to Breeder.
2d do do E. G. Cook Ellisburgh, Jeff. Co., "Florence Nightingale,"	$15
3d Best, 3 years old and upwards, Clark Hyatt, Owego, "Jenny,"	5
2d Best Heifer, 2 years old, Clark Hyatt,	10
3d do do Clark Hyatt,	5
Best Heifer, 1 year old, E. Cornell, Ithaca, "Helena 16th,"	15
2d do do E. Ottley, Phelps,	10
3d do do Clark Hyatt,	5
Best Heifer Calf, E. Cornell, "Yuba 3d,"	5
2d do do E. G. Cook, Ellisburgh, "Capitola," Trans. and	3

HEREFORDS.

Best Bull, 3 years old and upwards, M. C. Remington, Sennett, "Constitution,"	$25 and S. Medal to Breeder.
2d best Bull, 3 years old and upwards, A. Bowen, Medina, "Don Juan,"	$15
Best Bull, 2 years old, E. Corning Jr., Albany, "Washington,"	20
2d do do Ralph H. Avery, Wampsville Madison Co., "Magnumbonum,"	10
Best Bull, 1 year old, Ambrose Bowen, "Poppinjay,"	15
2d do do do "Duke of Orleans,"	10
Best Bull Calf, E. Corning, "Meteor,"	5
2d do M. C. Remington, "Prince,"	Trans. and 3
Best Cow, 3 years old and upwards, E. Corning, Jr., "Cora Jr.,"	$25 and S. Medal to Breeder.
2d do do A. Bowen, "Coquette,"	15
3d do do E. Corning, Jr., "Grace Jr.,"	5
Best Heifer, 2 years old, M. C. Remington, "Stella,"	20
2d do do do do "Rarity,"	10
3d do do A. Bowen, "Pretty Maid,"	5
Best Heifer, 1 year old, E. Corning, Jr., "Victoria 5th,"	15
2d do do M. C. Remington, "Delicate,"	10
Best Heifer Calf, E. Corning, Jr., "Perfection,"	5
2d do do M. C. Remington, "Beauty,"	Trans. and 3

HEREFORDS, (Imported.)

Best Cow, 3 years old and upwards, E. Corning, Albany, "Flora,"	$25

AYRSHIRES.

Best Bull, 2 years old, Henry Somerville, Ellicottville, ... $20

AYRSHIRES, (Imported.)

Best Bull, 3 years old and upwards, S. N. Andrews, Gravesville,.. $25

ALDERNEYS OR JERSEYS.

Best Bull, 3 years old and upwards, Thos. Messenger, Great Neck, L. I.,.............. $25 and S. Medal to Breeder.
Best Bull Calf, James O. Sheldon, Geneva,.................. $5
Best Heifer, 2 years old, James O. Sheldon,.................. 20
2d do do Thos. Messenger,.................. 10
Best Heifer, 1 year old, James O. Sheldon,.................. 15
2d do do James O. Sheldon,.................. 10

GRADE CATTLE—COWS.

Best Cow, 3 years old and upwards, Milo Holmes, Sandusky, ... $25
2d do do A. Bundy, Andover, ... 15
3d do do A. F. Wood, Woodville, ... 5
Best Heifer, 2 years old, A. M. Underhill, Poughkeepsie,........... 20
2d do do A. F. Wood,.................. 10
3d do do A. F. Wood,.................. 5
Best Heifer, 1 year old, A. F. Wood,.................. 15
2d do do Marcus Ansley, Geneva,.................. 10
3d do do C. Balcom, Painted Post,.................. 5
Best Heifer Calf, Joseph Hoffman, Elmira,.................. 5
2d do do A. F. Wood,.................. Trans. and 3

MILCH COWS OF ANY BREED.

Best Milch Cow, B. S. Carpenter, Elmira,.................. $20
2d do do B. S. Carpenter,.................. 10
Discretionary—A. Holbert, Orange Co., for Milch Cows,.......... 20

WORKING OXEN OVER FIVE YEARS OLD.

Best yoke of Oxen, A. Bundy,.................. $20
2d do do Enoch Ottley,.................. 15
3d do do Thomas Tufts, Gorham, Ontario Co.,............ 5
A premium of $20 was awarded to the town of Southport for ten yoke of Working Oxen.

OXEN FOUR YEARS OLD.

2d Best single yoke, C. W. Wadsworth, Geneseo,.................. $10

STEERS THREE YEARS OLD.

Best single yoke, Enoch Ottley, ... $10

The committee not being furnished with the evidence required by the rules, make this award conditioned that previous to its payment such evidence must be furnished the Secretary.

STEERS TWO YEARS OLD.

Best single Yoke, Enoch Ottley,.................. $8
2d do do C. W. Wadsworth, ... 6
3d do do A. F. Wood,.................. 3

FAT CATTLE—STALL-FED.

Best Ox, 4 years and under 5, Samuel Balcom, Campbell,.......... $12
2d do do James Wadsworth, Geneseo,........ 8
3d do do Samuel Balcom,.................. 5
3d best Cow, 4 years and upwards, M. C. Remington, Sennett, ... 4

FAT CATTLE—ON HAY AND GRASS.

2d best Cow, 4 years and upwards, Jud. Smith, Wellsburgh, ... $6

FOREIGN CATTLE.

Best Short-Horn Bull, 2 years and upwards, Geo. Miller, Markham, C. W., ... $15
Best Alderney or Jersey Bull, 2 years and upwards, Henry Smith, Patterson, N. J.,.................. 15

Class 3.—Sheep.

FAT SHEEP.

Best Long-Wooled, under 2 years, O. Howland, Auburn, ... $5
2d do do Amos F. Wood, Woodville,.... 3
Best Middle-Wooled, 2 years and upwards, Chas. B. Meek, Canandaigua,.................. 5
3d best Middle-Wooled, 2 years and upwards, William H. Coon, Medina, ... Morrell's Shep.
2d best to C. B. Meek,.................. 3
Best Cross-Breed, 2 years and upwards, H. Bowen, Jr., Medina,.. 5
2d do do Lyman Murdock, Medina, 3
3d do do Wm. H. Coon, Morrell's Shep.
2d best Cross-Breed, under 2 years, O. Howland,.................. 3

LONG-WOOLED—LEICESTERS.

Best Buck, 2 years and upwards, Amos F. Wood,.................. $10
Best Buck, under 2 years, A. C. Brooks, Olean, Cattaraugus Co.,... 10
2d do do do do do .. 8
Best pen 5 Ewes, 2 years and upwards, Amos F. Wood,........... 10
Best pen 5 Ewes, under 2 years, Amos F. Wood,.................. 10
2d best pen 3 Buck Lambs, H. J. Bentley, Veteran,.. Morrell's Shep.

LONG-WOOLED—NOT LEICESTERS.

Best Buck, 2 years and upwards, Luther R. Harris, Maine, ... $10
Best Buck, under 2 years, Cooper Sayre, Phelps,.................. 10
Best pen 5 Ewes, under 2 years, Cooper Sayre, ... 10
Best pen 3 Buck Lambs, Luther R. Harris, ... 5
Best pen 3 Ewe Lambs, Cooper Sayre,.................. 5

Commend to Enoch Ottley, Phelps, Cotswold Lambs; L. R. Harris, Maine, Broome Co., 2 New Oxfordshire aged Ewes.

MIDDLE WOOLED, SOUTH DOWNS.

Best Buck, 2 years and upwards, O. Howland, Auburn,............ $10
2d do do E. G. Cook, Ellisburgh,.......... 8
3d do do Clark Hyatt, Owego, ... 5
Best Buck, under 2 years, Jacob Lorillard, New-Yotk,............ 10
2d do do Samuel Thorne, Thorndale,............ 8
3d do do do do 5
Best pen 5 Ewes, 2 years and upwards, Clark Hyatt,............... 10
Best pen 5 Ewes, under 2 years, Jacob Lorrillard,.................. 10
2d do do Clark Hyatt,.................. 8
Best pen 3 Buck Lambs, do 5
Ben pen 3 Ewe Lambs, do 5

MIDDLE WOOLED, NOT SOUTH DOWNS.

Best Buck, 2 years and upwards, Jacob Lorrillard,................ $10
2d do do Charles B. Meek, Canandaigua, 8
3d do do C. Bassett, Coopers Plains,..... 5
Best Buck, under 2 years, Henry Somerville, Ellicottville,......... 10
2d do do Charles B. Meek,.................. 8
3d do do Thos. Messenger, Great Neck, Queens,. 5
Best pen 5 Ewes, 2 years and upwards, Thos. Messenger,.......... 10
2d do do C. Bassett,.................. 8
3d do do O. Howland,.................. 5
Best pen 5 Ewes, under 2 years, Jacob Lorrillard,.................. 10
2d do do C. Bassett,.................. 8
Best pen 3 Buck Lambs, Charles B. Meek, ... 5
2d do do Charles B. Meek, ...Morrell's Shep.
Best pen 3 Ewe Lambs, Charles B. Meek,.. 5
2d do do Thos. Messinger,............Morrell's Shep.

SPANISH MERINOES.

Best Buck, 2 years and upwards, J. Stickney, Wheeler,........... $10
2d do do D. Z. Gibbs, Wheeler,........... 8
3d do do N. M. Dart, North Harpersfield, 5
Best Buck, under 2 years, J. Stickney,.................. 10
2d do do D. Z. Gibbs,.................. 8
3d do do N. M. Dart,.................. 5
Best pen 5 Ewes, 2 years and upwards, N. M. Dart,.................. 10
2d do do George Brown, Phelps,... 8
Best pen 5 Ewes, under 2 years, N. M. Dart,.................. 10
2d do do George Brown, ... 8
3d do do J. Stickney, ... 5
Best pen 3 Buck Lambs, D. Z. Gibbs, ... 5
2d do do George Brown,.............. Morrell's Shep.
Best pen 3 Ewe Lambs, George Brown,.................. 5
Best Samples of Wool, not less than 5 fleeces, George Brown, S. Medal.

SILESIAN MERINOES.

Best Buck, 2 years and upwards, Wm. Chamberlain, Red Hook,.. $10
2d do do do do 8
3d do do George Brown,.................. 5
Best Buck, under 2 years, Wm. L. Chamberlain, Rhinebeck, ... 10
2d do do Wm. Chamberlain,.................. 8
Best pen 5 Ewes, 2 years and upwards, Wm. Chamberlain,........ 10
2d do do do do do 8
3d do do George Brown,.................. 5
Best pen 5 Ewes, under 2 years, Wm. L. Chamberlain, ... 10
2d do do Wm. Chamberlain,.................. 8
Best pen 3 Buck Lambs, Wm. Chamberlain,.................. 5
Best pen 3 Ewe Lambs, Wm. Chamberlain,.................. 5

FRENCH MERINOES.

Best Buck, 2 years and upwards, L. J. Jones, Veteran,............ $10

CROSS BREED OF FINE WOOL—SAXONS AND MERINOES.

Best Buck, 2 years and upwards, J. Stickney,.................. $10
2d do do A. R. Whipple & Son, North Barton,.................. 8
3d do do E. G. Cook, Ellisburgh,........... 5
Best Buck, under 2 years, F. J. Potter, Prattsburgh,.............. 10
2d do do J. Stickney,.................. 8
3d do do George Brown, Phelps,.................. 5
Best pen 5 Ewes, 2 years and upwards, E. G. Cook,.................. 10
2d do do James Whitney, Big Flats, 8
3d do do A. R. Whipple & Son,...... 5
Best pen 3 Ewe Lambs, George Brown,.................. 5
2d do do E. G. Cook,.................. Morrell's Shep.

CROSS BREED, OF COARSE OR MIDDLE WOOL.

Best Buck, 2 years and upwards, H. Bowen Jr., Medina,.......... $10
Best pen 5 Ewes, 2 years and upwards, Lyman Murdock, Medina, 10
2d do do H. Bowen Jr.,.................. 8
Best pen 5 Ewes, under 2 years, H. Bowen Jr.,.................. 10
Best pen 3 Ewe Lambs, Lyman Murdock,.................. 5

FROM OUT OF THE STATE.

Long-Wooled—Best Buck, Geo. Miller, Markham, C. W.,.......... $10
Do Best pen 5 Ewes, John Miller, Pickering, C. W.,... 10
Do do 3 Ewe Lambs and 1 Buck Lamb, J. Miller, 3
Middle-Wooled—Best Buck, John Snell, Brampton, C. W.,........ 10
Do Best pen 5 Ewes, John Snell, ... 10
Recommended to John Snell, Brampton, C. W., for 3 Fat Wethers. 5

Swine.

LARGE BREED.

Best Boar, 2 years old and upwards, A. B. Benham, Dryden, ... $10
2d do do Cornelius Fornett, New-York, 5
Best Breeding Sow, 2 years old and upwards, P. A. Smith, Elmira, 10
2d do do J. D. Thompson, Horseheads, ... 5
Best Breeding Sow, 1 year old, B. S. Carpenter, Elmira, ... 10
2d do do A. B. Benham, ... 5
Best lot of Pigs, not less than 5, under 10 months, A. D. Griswold, Southport,.................. 8

SMALL BREED.

Best Boar, 1 year old, A. M. Underhill, Poughkeepsie,............ $10
2d do do Amos F. Wood, Woodville, ... 5
Best Boar, 6 months and under 1 year, Elihu Griffin, Po'keepsie.. 8
2d do do Amos F. Wood,.......... 4
Best Breeding Sow, 2 years old and upwards, Amos F. Wood, ... 10
Best Breeding Sow, 1 year old, Edgar Merrill, Elmira,.............. 10
2d do do Amos F. Wood, ... 5
Best Sow, 6 months and under 1 year, Elihu Griffin,.................. 8
2d do do Amos F. Wood, ... 4
Best lot of Pigs, not less than 5, under 10 months, Amos F. Wood, 8
2d do do do Cor. Fornett, .. 4

I leave this prize list to speak for itself in preference to particularizing the individual contributions presented, both as showing better who were the principal exhibitors, and because my time for the examination of all the Stock was so limited. The Short-Horns, as represented by **Sheldon**, **Harison**, **Cornell**, **Sherwood**, **Page** and others, and the Herefords, as represented by **Corning**, **Bowen** and **Remington**, could not fail to have attracted the most superficial observer. Mr. **Thorne's** South-Downs—four yearlings, sired by imported "112;" and the pen of five ewes which received the first prize at the late Canterbury exhibition of the Royal English Society, and which have just been imported by **Lorillard** of Westchester, together with a yearling buck, were equally admired; while the Shropshires, also exhibited by the latter gentleman, are among the finest specimens of this breed I have ever seen. C. B. **Meek** of Canandaigua, showed both Shropshire and Hampshire Downs—two fat wethers of the former, by a ram which he imported five years ago, from the descendants of ewes brought over by him about the year 1837—and, of the latter breeds, a Hampshire Ram, imported by Betts, and now three years old, also a half-dozen ram lambs and three ewe lambs.

The exhibition of Long Wooled sheep was much indebted to the contributions of Geo. Miller and John Snell of Canada West, both fresh from the Provincial Show at Hamilton, where the latter received 24 premiums upon his sheep, and I learned that at his County Fair in the interim he had taken 52 more. Carl, as usual, was the representative of Mr. Chamberlain's Silesian Merinoes, of which there were nine pens on the ground.

Among the incidents of the Fair was the sale by J. M. Sherwood of Auburn, of the following Short-Horns at the prices respectively annexed, which were, as it will be seen, exceedingly low:

Name.	Price.	Purchaser.
Lady Sale 3d,	$125	A. R. Conger, Haverstraw.
Lady Sale 7th,	100	do. do. do.
Red Rose 11th,	125	do. do. do.
Red Rose 12th,	100	T. L. Harison, Canton.
Pauline,	45	T. W. Jones, New-Hampshire.
Patroona,	45	J, Edgar, Franklin, N. Y.
Bull—Rover,	70	do. do. do.
Sale,	50	A. B. Dickinson.

On Friday the address was delivered by Hon. Josiah Quincy, Jr., of Boston, to a large audience. It was not over an hour in length, and was listened to with interest.

—In conclusion. To the citizens of Elmira many thanks are due by the Farmers of the State, for their exertions to render every arrangement and detail as satisfactory and pleasant as possible. On no previous occasion, I think I am justified in saying, has the whole passed off more smoothly. The Officers of the Railroads connecting at Elmira, exerted themselves to facilitate the progress of affairs, and from beginning to end it has only been necessary that the wishes of the Executive Committee should be understood, to insure their speedy accomplishment. Much is due to John Harold, our General Superintendent, who was closely engaged for a week or more previously, as well as during the Exhibition, in explaining the requisites of the Society, and in organizing and systematizing more completely the arrangements of the Exhibition; he was assisted by an efficient police, and by active Superintendents in the various departments, with whose aid the wants both of Exhibitors and the public were probably never more fully met. The attendance, in view of the weather, was very fair, and the receipts are over $9,000. To-day nearly everything has been promptly closed up, and we are leaving with the consolation that if others of our Meetings have brought more money into the Society's exchequer, and elicited a larger exhibition from our more prominent breeders, few have been undertaken in any locality with more public spirit or carried out with more good-will,—and with the hope, I may also add, that few will have accomplished more in return, for the agricultural improvement of those who have joined to attend, either as exhibitors or spectators. L. H. T.

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NEW-YORK STATE FAIR AT ELMIRA.

The situation of the grounds was quite picturesque, occupying a portion of the plain two miles in breadth on which Elmira is built, and surrounded by the amphitheatre of hills beyond, several hundred feet in height, whose dense forests were richly variegated with the hues of autumn. The ground was dry, and with a natural drainage; and the erections were ample and convenient. The following is a list of some of the principal structures:

250 Horse Stalls,	6 by 12 feet.
300 Cattle Stalls,	6 by 9 do.
60 Bull Stalls,	7 by 12 do.
150 Sheep Pens,	6 by 13 do.
100 Pig Pens,	6 by 13 do.
Poultry Shed,	100 by 22 do.
Grain and Dairy Hall,	100 by 22 do.
Vegetable Hall,	100 by 22 do.
Domestic Hall,	150 by 48 do.
Mechanics' Hall,	210 by 48 do.
Floral Hall,	170 by 48 do.
Speakers' Hall,	50 by 6 do.

Besides several refreshment halls each about 100 feet long, and a number of smaller buildings for the various offices. An area of about five acres was occupied with agricultural machinery. As a single item in proof of the large amount of labor expended for this single week of exhibition, over six hundred thousand feet of lumber had to be drawn to the grounds for the various erections.

Floral Hall, a large building 170 by 48 feet, simply but tastefully ornamented with festoons of evergreens, was densely filled with many collections of fruit, and with a moderate display of flowers. The successive exhibitions of this kind, and the increasing extent and number of the fruit collections, indicate the gradual but rapid progress of fruit culture throughout the country, and the extensive introduction of the finer sorts. When the first State Fair was held at Syracuse, in 1841, the writer of these remarks took the first and nearly only premium by a collection which he carried in a basket on his arm; now, at Elmira, many tons of excellent and showy specimens lined the long and broad tables, and single collections contained from one to two hundred varieties of pears and apples, although but few nurserymen appeared as exhibitors. Ellwanger & Barry, as usual, took the lead, by presenting over 190 varieties of finely grown pears, most of them of celebrated or valuable sorts, and 194 varieties of the apple. Hovey & Co. of Boston, sent about 140 varieties of pears, and 36 of apples. J. M. Mattison of Tompkins Co., brought 20 sorts of pears remarkable for their fine growth, among which we measured Easter Beurres three and a half inches each way in diameter, Clairgeaus four and a half inches long, and Diels four inches—also 20 sorts of apples, and fine bunches of the Diana, Delaware, and other American grapes. ——— Hagerman of Starkey, Schuyler Co., exhibited a large collection of apples, apparently about a hundred sorts. E. Cornell of Ithaca, many sorts of apple, pear and peach; C. B. Curtis of Phelps, a large list of apples; and John Donnellan of Monroe Co., fine general collection. Among other less extensive collections we observed 38 sorts of pears from Truman Boardman of Trumansburgh; 12 of apples and 12 of pears from A. Braman of Ithaca; 26 fine sorts, including some new varieties worthy of notice, from J. Hildreth of Big Stream Point; and 20 each of pears and apples from N. Crittenden of Ithaca. A collection of some 20 sorts of exotic grapes was shown by E. Huntington of Rome, among which we measured bunches of the Black Hamburgh 9 and 11 inches long, and there were also fine bunches of Wilmot's New Hamburgh. In addition to the collections, already noticed, from Ellwanger & Barry, they had 25 kinds of plums, and the Hartford Prolific, Concord, Diana, Rebecca, Delaware, and other new American grapes.

The Ontario Grape, grown at Port Dalhousie, C. W., and exhibited by O. F. Presbrey of Buffalo, excited much attention. The bunches measured eight inches long, and we were assured that some had weighed two and a half pounds. The berries were seven-eighths of an inch in diameter. They appeared to be well ripened, and Dr. Presbrey assured us that this sort had proved twenty days earlier than the Isabella and ten earlier than the Concord. The berries are nearly free from pulp, possessed little or no foxiness, were juicy and quite agreeable, and moderately high flavored. They appeared most nearly to resemble the Isabella class.

The Exhibition of Implements was extensive and contained much that was interesting and valuable. The collection of mowers and reapers comprised most of the celebrated sorts, formerly noticed or described in our columns, in which evident improvements either in construction or finish were visible. A novelty, in the form of a potato digger, was attached to Kirby's mower, and is said to have succeeded well. The bar of knives is replaced with a curved blade or scoop, which runs under the hills, and to the rear of which iron fingers are attached which are vibrated by the machinery, and thoroughly shake out all the potatoes from the earth. The cost of this attachment is $25—more than some good potato digging implements. Russell's Screw-power Mower and Reaper substitutes the endless screw for gearing, and on a brief trial is said to have proved successful. A fine exhibition of horse powers was made by C. E. Pease, Emery Brothers, and others. Emery had two or three ingenious improvements. One consisted in a governor or brake for regulating the velocity of the rolling platform, and preventing any accident to the horses in case the band should be thrown off or the resistance be otherwise withdrawn. Another improvement is the attached revolving rake, the teeth of which are protruded on the lower side, and withdrawn on the upper side, by a simple and ingenious contrivance,—the teeth being set on an axle nearer the lower side of the hollow case through which they are thrust in operation. Hickok's neat and simple cider press, and Emery's efficient one, were in operation—the latter with its three screws acting together, operates with great satisfaction. The excellent cider mill of Krauser's invention was exhibited by C. E. Pease, of Albany. Among horserakes, Houston & King's wire-tooth wheel rake appeared to be one of the best, the workmen riding on a seat, and moving a lever for the deposite of each load of hay. A simple contrivance of value, was Prindle's patent clevis pin, quickly put in a whiffletree, and incapable of dropping out while in use. This little convenience cannot fail to be appreciated by plowmen and teamsters.

There was a good display of farm wagons and carts from different contributors, and also several beautiful specimens of pleasure carriages from James Goold & Co. of Albany.

Brown's improved wagon brake, of which a model was exhibited, both as applicable to sleighs and wagons, is so made as to operate whenever the weight is sufficient to drive the load forward on the horses. However perfect or otherwise this form of construction may be, the principle of a self-acting brake is an important one, and should not be lost sight of. The cast-iron feed trough, manufactured by Milton Alden of Auburn, is a neat, simple and convenient contrivance; one half of the trough being alternately covered with a convex cast-iron lid, so that the animals may be excluded until the feed is deliberately placed in the trough.

A great number and quite a diversity in construction, characterized the collection of straw-cutters. Those working by horse power must ultimately be resorted to by farmers, as a hand-machine is too slow in its work for a large or even a moderate herd of animals. Those working by a rotary cut must therefore be regarded as most valuable. Among these, we were especially pleased with Mumma's patent machine. The four knives cut with the cylindrical motion, and their exterior is made to form a portion of a true cylinder, the interior only being ground off in sharpening, which always leaves the cutting edge at the same exact line, and hence this cutter is always "in order" until the knives are worn out. It crushes the stalks in the act of passing them through the feeding-rollers. It may be worked with horse power, and cuts three-eighths of an inch long. The price is thirty dollars. Another good revolving cutter was Cumming's patent, the knives of which cut *upwards*, and thus avoid the accumulation of sand and dirt on the bed, which dulls the cutters. These machines have a neat and compact appearance. Two other kinds, of similar construction, were exhibited by A. Gordon of Rochester, besides which there were a number of others, of various degrees of merit, and many operating the lever or single knife.

Domestic Hall had about the usual display of the various kinds of household furniture, and numerous articles of domestic manufacture. Poultry Hall was well filled with a good display of domestic fowls; the Vegetable Hall was rather meagre, but had some excellent specimens; and Dairy Hall was well furnished with butter and cheese, and many specimens of grains and grass-seed.

It afforded gratification to observe the increased number of contrivances for relieving domestic toils, and among them several butter workers, a large number of washing machines, and a variety of churns. Doubtless among all these, some will prove on trial (the only sure test) to be really valuable. Palmer's extensive silk and thread reels, made of stiff wire and neatly constructed, and sold at about 50 cents each, appeared to a good household contrivance. Among sewing machines, that of Ladd, Webster & Co. attracted much attention for its handsome stitch and the facility with which it sews thin muslin, and thick leather, even the fourth of an inch in thickness.

Bartlett's Refrigerator is a well arranged and apparently an admirable contrivance for keeping fresh meats, fruits, &c., and affording at the same time a constant supply of ice water. The ice is placed in a hopper-like box or vault, from which the ice water settles into a small reservoir below, and is drawn off by a stop-cock.

DISCUSSIONS AT THE STATE FAIR.

REPORTED EXPRESSLY FOR THE CO. GENTLEMAN AND CULTIVATOR.

Culture of Indian Corn.

At the State Fair at Elmira, meetings for discussion were held in the evenings, at which much interesting information was elicited. On Tuesday evening the subject discussed was the culture of Indian corn.

The Hon. T. C. Peters of Genesee county, presided. Speakers were limited to ten minutes.

Mr. Brainard of Attica, N. Y., plants corn on an inverted sod. Spreads the manure on the sod and plows it in. Does not "hill" the corn. Thinks corn fodder valuable. Cuts up the corn at the roots. In a good season this gives most corn. In a poor season there is not so much gain as compared with topping. Never knew the full value of cornstalks till last winter, when fodder was so scarce. He chaffed his stalks and straw — two-thirds stalks and one-third straw. His horses did well on it. Horses fed on corn leaves never had the heaves.

T. C. Peters said chaffed stalks were good for horses. He did not believe in deep plowing for corn. He would like to hear from others on this point.

S. Walrath, Canton, St. Lawrence county, thought corn a more profitable crop than hay, which was the principal crop in his county. Planted his corn on greensward, 3½ feet apart each way. Hen manure excellent for corn. Had raised 80 bushels per acre. He planted the small eight-rowed and King Philip varieties. Cultivates by using the horse-hoe both ways. Does not hill.

Mr. Brockland of Duchess county, tried an experiment two years ago. He drew out 12 loads of manure per acre on a one year old clover sod. He then threw the land up into ridges four feet apart, and, as understood, then cross-plowed so as to form hills four feet apart, with the manure in the centre. He had 71 bushels on an acre, and the whole field of ten acres averaged 62 bushels per acre. He planted the eight-rowed Canada corn. Put a handful of plaster and ashes in each hill. Thought this method of culture would give large crops—but it was too much labor for general adoption.

John S. Pettibone of Manchester, Vt., thought the value of cornstalks for fodder depended on the number of "nubbins" the boys left in at husking! Would not top corn if he had grass enough. If grass was scarce would cut up the corn. Corn that is topped makes good fodder. The stalks, when topped, of a crop of corn that would yield 40 bushels per acre, are equal in value to a ton and a half of hay. When corn land is left bare in winter the strong winds blow off the fine soil, and on the side hills much of the richest portion of the soil is washed away. By topping the corn and leaving the butts standing on the land, this blowing and leaching is prevented. If he had regard simply to the amount of fodder he could get, he would cut up the corn at the roots; if he had regard to the soil, he would top the corn.

S. Walrath thought cutting up gave more fodder, and thus enabled you to keep more stock, and to make more manure, and thus enrich the land. The increase of manure thus obtained would more than compensate for the injury done by blowing and washing.

Gen. Marshall of Wheeler, Steuben county, thought farmers made a great mistake in being in such a hurry at planting time. They thought every year they would do better next time, but when the time came they were in just as great a hurry as ever. It does not pay to let boys do the planting. It would be more profitable to pay a man that would do the work properly, $5.00 a day. His soil was a gravelly loam. He drew out coarse manure on clover sod, and then turns it in as deep as he can and do the work well. Then rolls if necessary, and harrows till the ground is in good condition. Plants four feet apart each way. He smears the seed with soft-soap heated in a kettle, and then dries it till planted. The soap softens the seed and causes it to germinate more readily, while tar retards germination. He hoped farmers would try soft-soap—and we hope so too. The idea strikes us favorably. Had used hen manure mixed with unleached ashes, half and half, a handful in each hill, with good effect. On the right kind of land corn is the most profitable crop a farmer can raise. Feeds the stalks to his cows. In reply to a question, he said he never fed stalks to sheep. Gives his sheep straw, with a little grain.

Mr. **Plumb** of Onondaga County, prefers a clover lay of two years old. Plows under twenty loads of manure per acre. Does not plow more than six inches deep. Harrows and then puts on a two-horse cultivator. Plants three feet apart each way. Uses a horse-hoe freely, but does not hand-hoe, at least but very little. Uses ashes and plaster. Expense of cultivation from $8 to $10 per acre. Does not like much hill. Will not pay to hand-hoe much. Has raised from 180 to 185 bushels of ears per acre. Thinks corn more profitable than any other crop he raises. Does not top his corn; cuts it up by the roots. Thinks the fodder very valuable. Last year, on the stalks from ten acres of corn, he kept 150 sheep and twelve cows to the 1st of March. They had access to a straw stack. Raises the large eight rowed yellow corn—ears from eight to twelve inches long. In reply to a question, he said he had raised the white variety but liked the yellow better. Does not like the Dutton.

T. C. **Peters** spread the manure out on sod-land in the fall, and plowed it under in the spring four inches deep. He had tried planting three feet apart each way and three and a half one way and three feet the other. The thick planting gave most fodder, but less in proportion to the stalks. He chaffs his fodder. Has tried an experiment to determine the relative value of cornstalks and timothy hay. Both were chaffed and steamed. *The cows having the cornstalks gave the most milk.* The great secret of success in corn culture is to have the ground made very fine before planting. Never hills his corn. Never hand-hoes, except to kill Canada thistles. In reply to a question, he said he would not save his manure from the spring crops for the sake of applying it in the fall, but would use all he had on hand in the fall. He liked to make all the manure he could during the summer.

Solon Robinson, of the New-York Tribune, was called out, and said he had purchased what was called a "worn-out" farm in Westchester county, because he was tired of living on the pavements of New-York. Some of the land had not been plowed for thirty years. He put in the plow as deep as he could get it for the stones, and then followed with a subsoil plow. He drilled in the corn, in drills three feet apart, and dropped the seed ten inches apart in the drills. He planted the Improved King Philip variety, which was the best he had ever seen in the State of New-York. The season was very dry, and the corn did not do much at first, but he had a splendid crop after all. He cut it up (this year) the middle of September. He would cut up as soon as the best ears are well glazed. The fodder from this crop of corn was worth more per acre than the best crop of hay per acre in his neighborhood. If cut rather green and well cured, and afterwards chaffed, he thought cornstalks as good as the best timothy hay for horses and cattle. A gentleman at Springfield, Mass., had informed him that he had proved by actual experiment, that nine pounds of cornstalks chaffed and steamed were equal to twenty-five pounds fed in the usual way.

The Hon. A. B. **Dickinson** of Steuben Co., was loudly called for. He thought climate had as much to do with the culture of corn as soil. The soils of England are as good as in this country, but they could not grow corn. The climate was not hot enough. This very valley in which we are now, is one of the best corn growing regions in the country. It requires more labor to grow corn here than in the Sciota or the Miami valleys, but he had never seen as heavy crops there as here and in Western New-York. He had bought thousands of acres of corn in the western States, but never saw a crop of 60 bushels per acre that weighed 60 lbs. per bushel. Has seen a crop here of 120 bushels per acre. In regard to deep or shallow plowing, he would plow just as deep, and no deeper than the best soil went. If the land had been plowed deep before, and was rich to that depth, he would plow that depth, but he would not turn up raw, poor soil for corn. In plowing be careful to cover all grass and weeds. The distance of planting depended on the richness of the soil, and on the variety. Here the object should be to plant a variety that is sure to ripen, even if it is small. Plants such a small, early variety in drills three feet apart, and 20 inches apart in the drills, leaving three plants in a hill. In regard to hoeing; the soil here is apt to crust over and he liked to break this crust nearer the hill than could be done by the horse hoe. At the west the corn shot up rapidly, and hand hoeing was unnecessary. He thought *good* stalks were better than *poor* hay, but that there is as much virtue in an acre of cornstalks as in an acre of hay is ridiculous. Hay will fatten cattle, stalks will not.

Second Evening—Sheep Husbandry.

John Wade of C. W., stated that he finds it advantageous to feed well,—gives his sheep "all they want," but has never measured the quantity. He prefers the long-wooled breeds, and shears about 8 lbs. of washed wool per head. In order to keep up the vigor and hardiness of the Leicesters, he has to cross them with the larger and stouter Cotswolds. He remarked that Bakewell procured all the best animals he could find around him, and bred from them in-and-in, which injured their stamina, and rendered necessary a resort to Cotswold blood.

John S. Pettibone of Vermont, had long been convinced that for a farmer who has but 50 or 75 sheep, it is best to keep the larger mutton breeds; but for a flock 300 to 1,000, the fine-wooled would be the most profitable. A common cause of failure is in allowing the animals to run down in condition in autumn, at a time when the amount of feeders has increased by the growth of lambs, and the feed lessened. He regarded it important to have plenty of pasture and hay, which will maintain a good condition, but remarked "grain will do no hurt." He keeps them close and well sheltered during winter, and never lost but two lambs, which were by accidental injury. He said that one great secret of success was to attend to their flocks personally, and good care would be the result—he never knew a man to look at his pig while it was feeding unless it was fine and fat—the man who has poor animals always gives the food and then runs away. He never sells his best, but always keeps his best sheep—he keeps a record, and has them all registered, and no one can buy of him any that are marked "*best.*" He does not like excessively gummy sheep, and has known one to shear 22 lbs., but give less wool when washed than a clean-wooled one of 13 lbs.; yet many differ from him, because every one thinks "*my* sheep are best." He said gummy sheep are less protected from the cold, and are as tender as a cabbage-plant, and shiver in winter like a man with fever and ague.

——— **Baker** of Urbana, Steuben Co., has kept fine-wooled sheep—his management is to give his lambs a very little grain beginning in October, and continuing till winter—he then yards them where there is always a supply of water, feeds them in racks twice a day just what they will eat and no more. He has never raised the coarse-wool breeds—his fleeces are not gummy, and yield 4¼ to 4½ lbs. per head, and sometimes more He winters 400 head in a barn divided into three parts by a low board fence. The proceeds of his flock vary considerably, but average about two dollars per head annually. He is very particular to feed them always at the same time of day, with great regularity. He gives straw only a part of the time—if given constantly, he would add grain. He maintained that there is nothing like a flock of sheep to keep up the fertility of land; has kept 800 sheep a year on something less than 200 acres of land, including the hay and pasture for them; and has made the land so fertile as to raise 120 bushels of shelled corn on an acre. He feeds potatoes, beets, or carrots, to the ewes 20 days before lambing, and regards potatoes as the richest food, and beets the easiest raised on his land.

Gen. Harmon of Monroe Co., commenced sheep husbandry with the fine-wooled or Merino. After a few years, he crossed with Leicester,—then gave up the cross, and returned to the fine-wools. He greatly prefers the latter on his fertile wheat lands; finds their compact fleeces will keep the water out, and for this reason are hardier than the long and open-wooled. When he first crossed with the latter, he gave twenty-five dollars for the use of a long-wool ram for 25 ewes, and then bought for $50 another ram of the same kind, but would have made money had he given $50 to the man to keep him away. That was the amount of his experience with long-wool sheep. He does not allow ewes to have lambs under three years, and the fleeces average about five pounds. From 330 sheep he sold the last two years $700 worth of wool yearly—two years ago he had about 100 lambs, which he sold for $200, making $900 yearly proceeds. He occupies less than 200 acres, with mixed husbandry, feeds but little hay, but straw, corn, oats, and some bran—feeds in racks made of upright sticks set in holes bored in plank, nine inches apart, where the animals eat quietly without molesting each other. He washes the fleeces on the sheep till the water runs clear from them, and shears five to eight days afterwards. Shearers offered to do the work for six cents per head or for $1.75 per day—he accepted the former, but so large were the fleeces that they could make but $1.50 per day. He has fed his flock on 25 acres of reclaimed swamp, but remarked "there is no tallow in this land," it would merely keep the sheep but would not fatten them.

Lewis F. Allen of Black Rock, stated that he had kept sheep about 25 years, and that he has found it to depend entirely on circumstances whether sheep raising, or coarse or fine wooled animals are profitable. He related the anecdote of the builders of the city wall—the mason advised stone, the carpenter wood, while the tanner thought the wall would be toughest if made of sole leather. So every man had his preference with sheep. It is important to look to circumstances—along the line of the railroads and near cities the South Down sheep are best, being easily sent to market as mutton—in more remote regions he would select the Merino. He sells the South Down at $5 or $6, and sometimes $8 or $9, per head, and his lambs for $2.50—the wool at 40 cents per pound. In answer to a question whether he could distinguish different breeds by the taste of the mutton in thin slices, he said he could—and remarked that fine wooled animals secreted much grease and thus prevented proper perspiration, and that he could "taste the wool" in the meat.[*] He does not like the larger coarse wool animals, remarking that Canadians, who raise them so largely, have their foreign predilections—he had seen ewes of these sorts in Canada weighing 200 lbs. and rams between 300 and 400 lbs., "and as fat as they could roll"—he defied any man to eat a full meal of them—they were sent to the St. Nicholas and other large hotels in New-York, made a great show on the tables, and were much admired, but only a pound or two could be eaten off of a twenty-five pound piece, and the rest went to the tallow chandler—one might as well try to eat a cake of tallow. Roots should be fed cautiously to sheep, or they will scour, the danger being greater here than in England.

H. Bowen, jr., of Orleans Co., has raised both kinds of sheep, and coarse wooled for the past seven or eight years. He lives about 30 miles this side of L. F. Allen's, and also in a fine wheat region, and finds the coarse wools the most profitable for such lands, contrary to the expressed opinions of some previous speakers. His animals have averaged about 150 lbs., and sell for $5 to $10 or $12 per head, while the Merinos bring only $3. They have averaged six pounds of wool, which has sold at 31 cents per pound—some have yielded 8 lbs. He thinks they are a cross of Cotswold and Leicester, and says they have a compact fleece, and not loose and open, as had been previously objected to. He would prefer to have the sheep eat off his crop of clover and yield their manure, to plowing in the green crop.

L. F. Allen thought on heavy soil it would be best to plow in the clover—that it would render the soil looser—but that on a light soil, the sheep manure might be best.

Solon Robinson said the South-Down brings the best price in New-York city,—and next to these, the long wool sheep of Canada—that generally the largest carcass (such as had been asserted as "only fit for the tallow chandler") brought the highest price per pound. Common butchers did not distinguish the difference,—"their *taste* was to make the most money they could,"—but a class of first-rate retail market butchers pay a higher price for the best. He stated that early lambs, well fattened on grass, from New-Jersey, brought, first in the season, five dollars per head, and afterwards three to four dollars—and that a distinguished farmer up the river buys western ewes, breeds with them from his South-Down rams, and sells both in autumn for about $7 for each ewe and lamb.

Raising Corn and Oats.

The Chairman (T. C. Peters) said in explanation of his remarks on a previous evening, that the field planted in hills three feet apart was *good*—but in the field three and and a half feet apart the ears were larger, and there was consequently more corn for the number of stalks, not more on the land. He was satisfied that we often greatly overestimate the products of cornfields. He found there were 400 grains on an eight-rowed ear, and that it required four such ears, shelled, to make a pound when properly dry after midwinter. Four such ears, as an average, on a hill of four stalks, was as much as farmers usually get from a good crop—this would give but 56 to 58 bushels per acre, and he thought the man did well who obtained 40 bushels per acre. At three feet apart, there would be about 1200 more pounds or 20 bushels more per acre, if the ears were equally large. As a proof that thick seeding was not always best, he stated that J. W. Hyde had sowed only eight bushels of oats on four acres, (two bushels per acre) the land formerly a black ash swamp, but not drained, and having thrashed all, and measured it heaping, there were 107 bushels per acre. Others present mentioned very heavy crops obtained by sowing eight bushels, not on four, but on only *one* acre.

——— Crocker of Broome Co. had planted a piece of corn (3 acres) on which 60 large loads of rotted manure per acre had been applied, in hills four feet by 18 inches, 4 or 5 stalks to a hill, and all was well saved—he had not yet husked it. On the other hand T. C. Peters said his corn on the richest land, had grown so rank and thick, as to yield the least corn. Some mistake was, however, supposed to have been made.

Grass and Irrigation.

A. B. Dickinson alluded to his assertion of last evening that he could make a heavier growth of grass with clay than with manure. "One load of the poorest clay that you can find in Chemung," said he, "is better than two loads of muck even on clay land." "Grass is the all-important crop of the United States—all countries (with the exception of China,) where grass don't grow, become impoverished, and the inhabitants leave them; but all countries where grass grows abundantly, become richer." On grass land, one load of manure placed on the surface is worth two plowed in—and the clay would be of no benefit if plowed in, (except on sand,) while a load of clay carried on by irrigation, is worth two loads of muck. Irrigation, effected by muddying the water, and continued yearly for five or six years, will give more grass than any manuring, by *mulching the roots*, and making the grass grow stiffer, and solider. He had a rank growth of meadow this year, but because it did not *stand*, it became really half a ton to a ton less per acre, than some other portions. The running on of the clay must be done late in autumn, in winter, or very early in spring. Fresh soil is plowed up, and the water streams being turned on, carry it off, by stirring, to the grass land. He has found that irrigating with clear water is greatly inferior to this treatment. He has had a little over 4½ tons per acre of hay. Solon Robinson showed him a bunch of hay selected from the New-York market, consisting of about two-thirds ox-eye daisy and one-third June grass, but Maj. Dickinson cast it from him with contempt, and said he would not cut such grass. In answer to a question, he said he could easily and effectually destroy the daisy by deep plowing with the double Michigan plow. Where he cannot irrigate he manures on the surface, when the ground is hard in summer, on the most sterile spots, and not by any means when the soil is wet and soft. He sows of grass seed per acre, one peck of timothy, one of clover, four quarts of red top, two of white clover, and two of blue grass.

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[*] J. Harris of the Genesee Farmer, stated subsequently at the same meeting, that he had always been an advocate of the same views; but being subsequently at John Johnston's, the latter had a very fine saddle of mutton on his table, and called on him to test his theory. "What kind of sheep is this mutton from?" asked the host. "Why," replied he, "it appears to possess all the excellence of the South Down, but its size indicates the Leicester. It must be the South Down." Other gentlemen present concurred in its excellence. "It is the Saxon Merino?" remarked John Johnston, to the surprise of all, and to the utter demolition of the beautiful theory.

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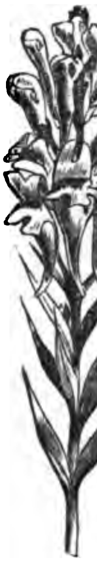
TOAD FLAX OR SNAP DRAGON.

Messrs. Editors—Enclosed I send you a weed that made its appearance on my farm about three years ago in a single small patch, which was taken but little notice of. Since then it has multiplied its patches at a fearful rate. It spreads very rapidly, and entirely runs out the grass. Last fall I put some old fish brine on a patch of it, which seemed to kill it for the time, but this year it is the most luxuriant patch on the farm. If you can inform me through your columns its name, and the best way to extirpate it, you will greatly oblige one subscriber, and perhaps many. B. P. Bobbins. *Springfield, Mass.*

This plant is the notorious Snap Dragon or toad-flax, one of the worst weeds that can obtain a foot-hold in land. As we have very frequent inquiries in relation to it, we copy from the article on Weeds in the Illustrated Annual Register for 1861, the following description and cut:—

Toad Flax or Snap Dragon, sometimes called "Butter and Eggs" from the color, (*Linaria vulgaris.*)—An exceedingly troublesome and pernicious weed, extending now through the Northern and Middle States. The root is perennial and creeping; the whole plant very smooth; the flowers somewhat in the form of lips, the outer part pale yellow, the palate tinged with orange, and each flower furnished with a horn or spur half an inch long. It grows one or two feet high and quite erect. It is common in many places along roadsides, fences, and in pastures. Cattle will not eat it, nor the grass it grows with.—Spreading in dense patches, it soon prevents the growth of other plants. It is difficult to eradicate—the best mode is repeated plowing and harrowing.



Toad Flax.

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Bringing Home the Cows—Milking.

Among my memories of boy-life on the farm, how freshly still comes up one of twilight time—the "bringing home the cows" from their woodland pasture. The "only boy" for years, many a score of autumn eves have I explored the "big marsh" and the "sugar bush," both bordered and islanded, here and there, with grass for the wandering kine; and time and again "the sun was low" on our horizon, whatever it may have been "on Linden's hills," ere I found them. How I hurried to get back through the strip of woods, stumbling along in the fast deepening shadows, half-afraid of the loneliness and the hooting owls, and conscience-smitten for my tardiness in starting. How often, too, was the evening air filled with the songs and shouts with which I strove "to keep my courage up," until "out of the woods," and in sight of the barn on the hill. Coming through the open fields, I could always on pleasant eves, see, and often mocked, the night-hawk, who seemed to gasp for breath when he swooped down from his lofty circlings.

But now-a-days we are told it is not "boy's work" to bring home the cows. We were taught then, that they must not be driven hurriedly home at night, if ease in milking and full pails are desired. Not only will they give less milk, but it will produce less butter or cheese, quart for quart, than where their quite is carefully guarded. The *Homestead* says: "A dairyman complains of the season as bad for the dairy, but his neighbors say, the training of shepherd's dogs is worse than the season;" as much as to say that the cows are "worried to death" by their canine drivers. The same paper says that the astonishing yield occasionally claimed for single dairies, depends on several causes—not the least among them is careful driving. "Inquiring out one of three large reports, we found that the owners, the man and his wife, not only did all their milking themselves, but they *always brought and drove their own cows.*" But this cannot always be done. The boys must very generally "bring home the cows;" but let me admonish them to take plenty of time for it, and let the cows take *their time*, and due order of precedence. I shall not blame them, however, if they throw sticks when the "master cow" takes her stand in the gap, and refuses to let any other pass save at her own queenly will and pleasure.

Not many years passed by before I had not only to drive the cows, but to milk—had a pail of my own, and my favorites of the herd. And let me say that milking is a good deal of an art; one which few boys do well, though it is one on which much of the profit of the dairy depends. From observation and experience, I offer the following hints as important. There must be good temper, and a good stock of patience to begin with. In dealing with a cow, as with a human learner, be kind and firm; show them what you wish, that they can do it readily, and that it must be done. I always like a one-legged stool to sit upon when milking. With such, one can move readily, and inequalities of the ground make no difference. Have a little clean water to wash the teats off in the morning, if they lie in the dirt, and if you need any thing to moisten them, use water, not milk, for that purpose. Milk gently and evenly, but as rapidly as possible, and be sure to milk clean—draining the last drop, which is always the richest in cream, from the teats. Failure in this respect rapidily diminishes the quantity of milk furnished by the cow; indeed, the method usually practiced in drying off a cow, is to but half milk her. Let the milking time be as regularly as possible at the same hour in the day, morning and evening, and each cow have the same milker, as far as convenient. The quiet of the yard should be carefully preserved.

But (if you will allow me) another reminiscent paragraph. What pleasanter rural scene can greet the eye than that of the cows returning from their pastures, so calmly and leisurely, full-fed and well supplied with milk—receiving the milker's attentions with quiet satisfaction, "chewing the end of sweet" and tender herbage. Many a bright memory comes back, as I think of "milking time" and its associations. I can see the stars come out, one by one, in the twilight sky; I can hear the cheep of the tree-toad upon some mossy rail; the bats are whirring above us in many a circling flight, and my mother's song comes to my ear from across the yard. Longfellow has woven such a scene into one of his poems, and looking back upon it, through the haze of years, it does seem poetical. But your paper has to do with the *practical*, yet I hope its readers will excuse thus much of a flight.

Maple Hill, N. Y., Sept. 12. B.

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Buckwheat Straw.—J. A. Hubbard, writing to the N. E. Farmer from a locality in Maine, where this grain is very extensively grown, says that buckwheat straw "is injurious to young pigs, and if they lay in it, it will set them crazy, and they will finally die. It is hurtful to hogs and young stock to run through it when green, making their head and ears sore and itch very much."

Practical Farming in Onondaga County.

We propose by permission of Mr. Secretary JOHNSON to make some extracts from the Agricultural Survey of Onondaga County, which appears in the Transactions of our State Society for 1859, from the pen of Hon. GEO. GEDDES. From the chapter entitled "Practical Agriculture," of which we are favored with advance sheets we select the following on

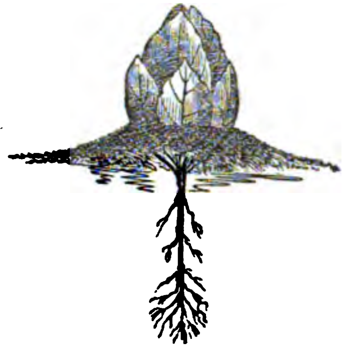
Culture of Tobacco.

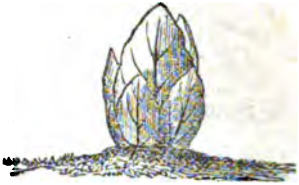
The cultivation of tobacco, as a crop, was commenced in this county in 1845, by Chester Moses and Nahum Grimes, both of the town of Marcellus. They joined in hiring a man from Connecticut, who was skilled in the culture. In 1846, Col. Mars Nearing, then of the town of Salina, raised ten acres; and very soon others engaged in a small way, in raising this crop. By the census of 1855, it appears that in the preceding year there was raised, in the whole county, 471¼ acres, yielding 554,987 pounds; which gives as the average yield, 1,178 pounds to the acre. It is thought that this crop pays a better profit, on suitable ground, when skillfully handled, than any other raised here. Expensive buildings are first necessary; then high manuring, careful and laborious cultivation, accompanied with skill, and a sacrifice of manure for other crops—unless it can be purchased—are to be taken into the account by any person who intends to enter on its cultivation. In the immediate vicinity of manure that can be purchased, this crop is increasing; perhaps it is in other places, but what the effects may be on the profits of other crops, there has not been sufficient time to determine since the introduction of what is now a staple. Mr. Benjamin Clark of Marcellus, who is perhaps better acquainted with the facts in regard to the culture of tobacco than any other man here, estimates the production of 1859, as of the value of $150,000: of which he estimates marcellus as producing $25,000 worth; Skaneateles $10,000; Van Buren $20,000; Lysander $10,000; Manlius $8,000; Camillus $5,000; Geddes $4,000; Salina $8,000: Elbridge $6,000; Onondaga $8,000, and the residue divided among the other towns.

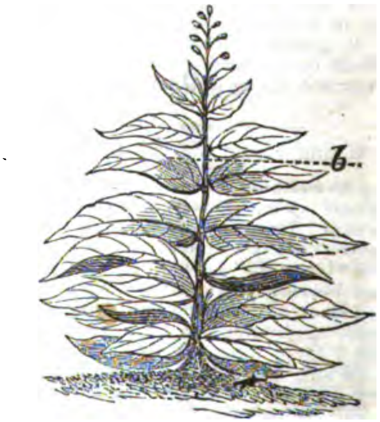
The Tobacco Plant in full Blossom.

From Mr. Clark, the following facts and estimates in regard to this crop are derived:

A warm, rich, well drained and mellow soil should be had, and then twenty-five loads of rotten barn-yard manure should be put on an acre. The land being in high condition, this amount of manure will be consumed by a crop. The plants should be set about the first of June, three feet four inches, by two feet to two feet six inches apart. To raise the plants, the fall before pulverize the bed fine, and mix with the soil hog or some other manure that has no foul seeds in it. Sow seeds on the well raked bed, as soon as the ground can be properly prepared in the spring, about one ounce to a square rod, equally distributed all over the bed. Roll hard with a hand roller, but do not cover the seed. Glass should be kept over the bed until the plants appear, which will be in two or three weeks; after they are up and started, the glass will be required only at night and in cold days. The bed should be kept moist and free from weeds. When the plants are three inches high they are large enough to set. To prepare the land, the manure should be applied as early as the ground is dry enough to plow. The last of May plow and harrow again, so as to mix the manure well with the soil. Mark the land one way for rows, three feet four inches. Make hills by hauling up a few hoes full of dirt and press it well with the hoe. In taking the plants from the bed take care to keep the roots wet. Unless the ground is quite damp, put a pint of water on each hill half an hour before setting. Make a hole, put in the root, and press the dirt close to it, all the way to the lower end. If any plant does not live, take care to set another. Uuless the earth is wet, or at least moist, water the plants as soon after setting as may be necessary. In about one week cultivate and hoe. In ten or fourteen days repeat the operation, and continue to cultivate so as to keep the weeds down. The tobacco worms may appear about the second hoeing; *kill them as fast as they show themselves.* When the blossoms appear, break off the stalk, leaving about fifteen leaves, taking off about seven leaves.

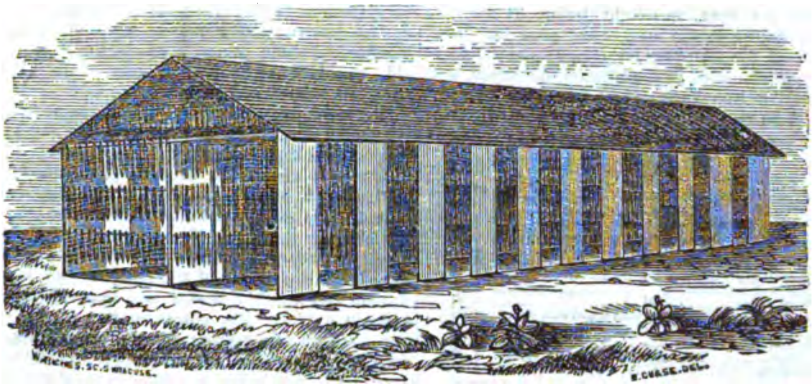

The plant and root as should be set.


The plant as set in the hill.



A plant ready to top, place for topping indicated by b.

After topping, break off all the suckers. In about another week, go over again, breaking off suckers and killing worms. In another week repeat the operation.



Tobacco House without side doors, end boarding, and end doors, to show the manner of hanging the Tobacco.

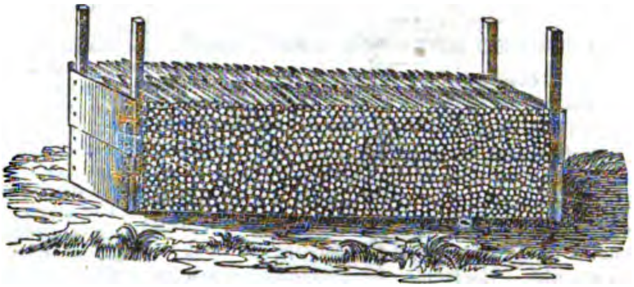
By this time the crop is ready to begin the harvest. This may be known by the suckers which start at every leaf, and when they have all appeared down to the lower leaf, the plant is ready to cut, every sucker having been removed as it appeared. The stalks are cut at the root. In a warm day cut in the morning and evening. In the middle of a hot day, the leaves will burn before they are wilted. The best way is to cut in the afternoon and lay on the ground to wilt. This wilting forwards the process of curing, and so toughens the plant as to make it practicable to hang it without much loss in breaking leaves.

Plant after topping.

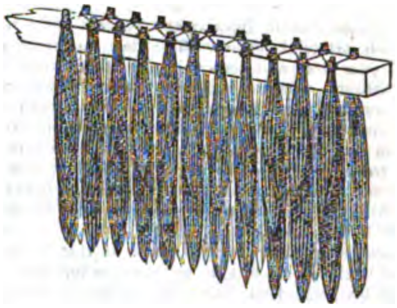
After wilting draw to the house, which should be twenty-four feet wide, fifteen feet high, so as to have three tiers, one above the other. A building of this width and height, thirty-five feet long, will store an acre, or one ton of tobacco. The girts on the side of the building should be five feet apart; a row of posts through the middle is necessary to put girts in, to hold the poles that the plants are tied to. The best poles are made of basswood sawed one and a half by four inches, and twelve feet long.

Plant with the suckers growing.

The plants are handed to a man who, standing on a moveable platform made by a light plank, receives them, and beginning at the upper tier he winds a piece of prepared twine around a stalk, fastening the first plant to the pole; the second plant is placed on the other side of the pole, and a single turn is made around the stalk; then again the third stalk is put on the same side of the first, the twine passed around, and the next on the other side, and so on to the end of the pole, where the twine is made fast. About thirty or thirty-six are hung on a pole, one-half on each side. If this twine gives way it is manifest that they will all be let loose. The poles are put on the girts about fourteen inches apart. In this way the whole building is filled. Skill is now demanded to regulate the ventilation until the crop is cured, which is determined by examining the stem in the leaf, which should be hard, up to the main stalk. Then in damp weather the tobacco can be taken down and laid in piles, with the tips together to keep it from drying, and to secure this, cover over with boards. The next thing is the removal of the leaves from the stalks, taking this time to separate the broken leaves from the unbroken ones. They are then made into parcels of 16 or 18, called "hands," and are fastened by winding a leaf around them. Pile these hands tips on tips, the square ends out. This preserves the moisture. The pile should be kept covered with boards, and the sides also covered, leaving the wound ends of the hands exposed to the air. If everything up to this point has been skillfully done, in four or five days the tobacco will be fit to pack in cases, and take to market. The cases should be of pine, two feet six inches square, by three feet eight inches, and of inch lumber. Place the hands tips on tips, and the wound ends against the ends of the box, press with a lever or screw until 400 pounds is in, then fasten on the top. The tobacco now goes through the sweating process, and will



Tobacco stacked after stripping.



Hanging Tobacco on the poles.

lose about ten per cent. in weight before fit for use. This tobacco is known in the market as "seed leaf," and is principally used for wrappers for cigars; the refuse is exported. A crop handled in the manner, described, and with skill, will sell in New-York city, at from 12 to 15 cents a pound; but from want of proper care and skill, the crop of this county does not bring an average price of over eight cents.

COST OF CROP.

The plants are worth per acre,	$2.50
Manure, 10 cords, say,	20.00
Fitting ground and marking,	4.50
Planting and setting,	5.00
Cultivating and first hoeing,	2.00
do. do second hoeing,	1.50
Topping, and killing worms, say	1.00
Suckering, first and second times,	2.00
do. third time,	4.00
Harvesting and hanging (four men and team one day,).	6.00
Stripping one ton,	10.00
Five packing boxes,	5.00
Labor of packing,	1.50
Twine for hanging,	1.00
	$66.00

A ton at 13½ cents, is worth $270; deduct 10 per cent. for shrinkage, and 1¼ cents per pound for transportation and commissions, in all $52, leaves $218 as net proceeds. The cost being taken from this, $66, and we have 152 for the use of lands and buildings.

This is the best statement that can be fairly made for this crop. If the price be put at the average our growers get, viz., 8 cents per pound, we have for the crop, 1,800 pounds, after shrinking, $144. Deduct $66 for cost, and $22.50 for commissions and transportation, in all $88.50, which deducted from the amount received, leaves $55.50 as the ordinary profit per acre.

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SCATTERED NOTES OF TRAVEL—II.

Cincinnati and Vicinity.

Clifton, two or three miles north of Cincinnati, consists of a large number of beautiful residences, in a picturesque portion of country, forming a continuation of fine places, unequalled by any thing of the kind that we know of except Brookline, near Boston. We made a short call at the residence of WM. RESOR, now absent in Europe. This is one of the best specimens of landscape gardening we have met with. The lawn occupies several acres, and the disposition of the trees, walks, carriage drives, &c., is nearly faultless. The cold grapery presented an unusually fine display of ripe fruit. The dwarf pears were in excellent condition, and bending under loads of large and smooth specimens,—some of them equal to any we have seen at Rochester or Boston. The trees were some ten years old. We never saw finer specimens of the Angouleme than here. The Winkfields and Diels were large and fair. The dwarf pear has not certainly proved a failure in this region.

The grounds of R. BUCHANNAN possess great natural and much artificial beauty. The view on two opposite sides, over a broad and deep valley, in which could be discerned distant villages, richly cultivated fields, Spring Grove cemetry, and the grounds of the United States Agricultural Fair, is extensive and magnificent. He has added an artificial lake, and planted the slopes with ornamental trees, orchards and vineyards. The apple trees, of which there were many varieties, were bearing heavy loads of fair fruit. The most profuse bearers were the Willow Twig, Winesap, Yellow Bellflower, Rawles' Janet, Belmont, and Romanite. He informed us that if he were confined to three varieties, he would select for early, medium, and late, the Red Astrachan, Maiden's Blush, and White Pippin. His Catawba vineyard is the best we saw in this region—the berries become more deeply colored in the neighborhood of Cincinnati than any which are ripened at the east, being often of as deep a purple as the half ripened Isabellas that are sometimes shown as fully matured. Pears, both dwarfs and standards, succeed well; but they will not bear the high culture and manuring which we give them in New-York and New-England. Standards do best when standing in grass, after attaining considerable size. Among others, a Jaminette, some fifteen years old, was bearing a most profuse crop. Dwarfs need moderate cultivation.

The residence of G. TAYLOR, in the same neighborhood, is a model English gothic dwelling, and the grounds are laid out and kept in a satisfactory manner.

The most elaborately wrought place which we visited, is that of R. B. BOWLER, which not only commands a view of great magnificence, but possesses much picturesque scenery within itself. The highly diversified surface is greatly improved by judicious grading and successful planting—the lawn, mostly of the poa pratensis, is in fine condition, and exhibits a soft and smooth carpet of many acres in extent. The conservatory partakes strongly of the character of a grotto; its wild rocky sides, when covered with moss and trailers, will present a striking appearance. The hot-house is completely secluded by densely planted ridges or mounds, giving its position a wild and picturesque character, this portion of the grounds being entered through a winding rocky tunnel. While there is much that is admirable and interesting in these grounds, there are others that are objectionable;—the rocky tunnel, entering the green-house grounds, is too small and dark, and should be lined with rock plants. The house is rather low, and a mixture of styles.

Spring Grove Cemetery, a mile or two distant from the last named place, is one of the best managed cemeteries of this country. It includes about two hundred acres, a part of it much diversified in surface, and among the improvements, comparatively little to offend a correct taste. We do not see the vast expenditures for monuments found in some of the eastern cemeteries. Many acres, next the entrance, are devoted simply to landscape gardening, the cemetery lands proper being at a distance, which gives a finer effect than an abrupt entrance among monuments at the moment of passing the gate.

Nurseries.—There are several nurseries in the neighborhood of Cincinnati, all of moderate pretensions. We found time to visit only two:—

The nursery of WM. HEAVER contains some 30 or 40 acres, occupied with a general collection of ornamental and fruit trees. Dwarf pears flourish finely, a single season's growth being often five or six feet high, and the bearing trees eight or ten years of age growing vigorously. Evergreens do well. There are several long structures for propagating and growing plants under glass, with something of a decayed appearance however. The establishment of SAYRES & HUTCHINSON, on the opposite side of the road, has several objects of much interest. Among them were a beautiful Norfolk Island pine, a Caladium distellatorium, the leaves of which measured 25 inches long and 20 inches wide—there were about fifty leaves of this size, forming a mass five feet high and seven in diameter. Many dwarf pear trees were eight or ten years old, in a thrifty condition. They are but moderately cultivated, and not manured, the soil being deep and strong, and a medium vigor is regarded as a better security against blight in this region.

LATONA SPRINGS, KY.—A pleasant carriage ride of five miles up the picturesque and beautiful valley of the Licking led to the residence of Dr. MOSHER, at Latona Springs. It is surrounded by a natural grove of three acres, containing, as he informed us, no less than sixty-three different species of forest trees. Dr. MOSHER has given much attention to proving the different varieties of the apple. Among those which succeed well are the Winesap, Bullock's Pippin, Pryor's Red, eastern Vandevere, Fameuse, and others. The Benoni proves excellent, the tree as elsewhere being a very fine and symmetrical grower. The Broadwell and Blenheim Pippin are excellent sweet varieties. We saw a Northern Spy bearing a few fine specimens. The Jonathan appeared to be doing well—the Esopus Spitzenburgh exhibited its peculiar and rich flavor, but the apples were not of very fair appearance. Hubbardston Nonsuch appeared to be as good as in New-York. The Yellow Bellflower, although good, is rather declining in character. The White Bellflower or Ortley, very fair, and showing little of the scabby appearance so prevalent in other places, and especially at the east. The White Pippin proves one of the most valuable sorts.

Dr. Mosher's vineyard occupies about six acres, on the side of a high ridge of land, in a most picturesque position, facing the south. The vines are chiefly the Catawba, are planted in the quincunx form, four feet apart, and trained to single stakes about five feet high. The cultivation is effected by hand labor, and in spring the soil is loosened up by forking. An excellent contrivance is adopted to prevent the washing down of the soil on the steep hillside and the formation of gullies. Open ditches are cut at distances of about five rods, directly down the hill, and are walled at the sides, and paved on the bottom with flat stones set across the channel on edges. These ditches are placed at the lowest places, so that the surface water flows readily into them from each side, in slight channels between the horizontal rows of vines. Although large and rapid currents flow down the hillside through these drains, no injury whatever can be done.

The Catawba grape is becoming considerably affected by the rot, and other sorts are looked to to supply its place. Dr. Mosher thinks the Delaware is going to prove one of the best substitutes. The Venango he thinks will be one of the best wine grapes, being entirely free from rot, hardy, and productive. It is of no value for the table, being essentially a brown Fox, but as late as the Catawba. The Herbemont ripens admirably here, and proves very delicious—about as good as the Delaware. and possessing all the characteristics of an exotic in quality,

Richmond, Ind.—A small but excellent nursery has been established near this city, by J. J. Conley, containing a good green-house, ornamental stock, and a fine collection of fruit trees. The Dukes and Morello cherries succeed well, as they do elsewhere through the west, and a trial of several years has been successful with most of the Heart varieties worked on the Mahaleb, and trained low. We observed a large number of nursery trees of the variety known in this region as the Early May, which is neither the Early Richmond, as some have supposed, nor the true Early May or Indulle. It appeared to be a stouter grower than either—it had not the clear slender shoots of the Early Richmond, nor the feeble and dwarf growth of the true Early May. J. J. Conley informed us that he had fruited this "Early May" along side the Early Richmond; that the latter was about ten days later, and decidedly superior in quality. In common with many other fruit growers, he has a high opinion of the White Pippin, and would select this for its general value in preference to any other winter apple. The Catawissa raspberry fails with him, being small and unproductive. He showed us a seedling of the Ohio Everbearing that he deems much superior to the parent variety—it was loaded with its autumn crop of well formed berries. The Wilson's Albany Strawberry has borne profusely, but as elsewhere is not of the highest quality. We regretted being unable to visit the nursery of E. Y. Teas, a few miles north, and that of J. C. Teas, several miles west of this city, both intelligent cultivators and correspondents of this paper.

Hedges of Osage Orange abound through this region of country, in the vicinity of Cincinnati, and elsewhere. Many of them appear to have been carelessly planted, and remain uncultivated and uncut. They are consequently good for nothing. On the other hand, many others are well managed, in the manner we have occasionally recommended, and form dense and perfect barriers. Some are left too broad at the top, which tends to make them thin and open below. The best hedges were usually cut to a sharp ridge at top, and but little sheared on the sides near the bottom, causing the latter to grow thick inside.

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Lice on Cattle.—I often see inquiries for remedies for lousy cattle I have tried many, but the cheapest, most easily applied, most effectual, and according to my experience the safest, is a little calomel sprinkled on the back. An ounce will exterminate the lice on twenty head of cattle or more.

L. C.

[For the Country Gentleman and Cultivator.]

How to Keep Cider.

For the information of "B." (Co. Gent., page 192,) and others who are interested, I will give my experience in keeping cider.

To a 40 gallon cask of pure juice, fermented to a point to suit my taste, I added one bottle of prepared *sulphite of lime*, as sold by Messrs. Webb & Walker of Utica, N. Y., (cost 50 cents,) stirred it briskly and bunged it tight. On the 10th of April I drew off and filled six dozen bottles from one of the barrels (keeping the remainder on draught,) and my neighbors say it is as good as wine. I think it better—it is *splendid*, and as far as I can judge from one season's trial, it is all the *clarifying* necessary. *It is not intoxicating*, neither will it make vinegar. It is as clear as champagne, and almost as sparkling. I should in justice add, that I was induced to try this method by a notice of it in your valuable paper, and if Mr. B. will look over his back numbers he will find several notices of the method, and in one, if my memory serves me, the *philosophy* of it is explained. D.

Holland Patent, N. Y.

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[For the Country Gentleman and Cultivator.]

How to make Bread from Unbolted Wheat Flour.

Wheat meal seven pounds; carbonate of soda, one ounce; water, two and three-quarter pints, muriatic acid 420 to 560 drops. Mix the soda with the meal as intimately as possible by means of a wooden spoon or stick, then mix the acid and water, and add it slowly to the mass, stirring it constantly. Make three loaves of it and bake it in a quick oven. The above receipt is patented in Great Britain.

Fermented Bread.—Wheat meal six lbs.—good yeast, a teacup full, and a sufficient quantity of pure water—kneed thoroughly. Bake it in small loaves, unless you have a very strong heat.

Another way:—Wheat meal six quarts—molasses and yeast, each a teacupfull, and a sufficient quantity of pure water. Make the loaves half the thickness you mean they shall be after they are baked. Place them in pans, in a temperature which will cause a moderate fermentation. When risen enough, place them in the oven. A strong heat is required P. S. *Ransom, Pa.*

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[For the Country Gentleman and Cultivator.]

Recipe for Grape Wine.

To 1 quart of water add 1 pound of moist sugar—let them be well boiled and skimmed, and to every quart of this liquor put 1 pint of the juice of the grape. The above recipe has been well tried and approved. Rusticus. *Shipton, C. E.*

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[For the Country Gentleman and Cultivator.]

Caponizing Chickens.

Eds Co. Gent.—A severe cut in the hand has prevented my replying at an earlier moment, to the inquiry made of me by your correspondent of Arkansas, Mr. Ben Cooper. The operation of caponizing is simple, and may be performed by any one accustomed to the use of a needle and thread and scissors. The chicken should be full four months old, indeed should be just commencing to crow. Now place him across the knee, with the legs pulled forward and firmly held by an assistant. Pluck off the soft fine feathers between the end of the breast bone and fundament, and midway between these two points make an incision an inch and a half long, cross wise of the chicken's body, with a sharp pair of scissors. Through this incision insert the fore finger to the back-bone, along which move for an inch and a half, and on either side will be found a testicle. Dislodge them by a single twist, and withdraw by the route the finger went in. Draw the edges of the wound made together, and half a dozen stitches with waxed thread completes the operation. The nail of the finger must be smooth, so as not to damage the intestines. This is an imperfect description it must be confessed, but it is my best.

It will give me pleasure to forward a pair of my fowls to Mr. C., if he will address me at Burtonia P. O., in this county, saying to whom in Vicksburgh they may be sent.

It should be mentioned, that previous to the operation of caponizing, the chicken must be deprived of food for eighteen or twenty hours.

The recent long drouth has cut short both the corn and cotton crop in this neighborhood one-third, many think one-half

Ridgeland, Washington Co., Miss. Wm. P. Gibson.

[For the Country Gentleman and Cultivator.]

A WHEAT TALK WITH FARMER F.

We like, when we meet with an intelligent farmer, to have the talk turn upon farming—a matter in which we have long taken much interest; an interest which deepens every day of our lives. To-day, while riding to town, we had an hour's conversation with Farmer F., who carries on some two hundred acres of good land very successfully; being counted by his neighbors a "lucky man" in growing crops and stock, and in disposing of the same.

Among other things (to drop the prefatory *shuck* and get at the *kernel*,) he told us about his two fine fields of wheat, just coming up, and looking as though "put in" in capital good order. They were sown with the

Lambert, or "Weevil-proof" Wheat,

originated in Ohio, some nine or ten years ago. It is a light red wheat, from three to five days earlier than the Mediterranean, with a light blade and straw, and easy to thresh. The yield is from 15 to 30 bushels per acre. Mr. F. and his neighbor Mr. S., who joined him in introducing the wheat here, offered $5 to any person who would find a weevil (or larvæ of the wheat midge) in it, but no one succeeded in taking the reward. The fact is, the hull or chaff is double, so that the midge fly does not pierce to the kernel in depositing her egg, and it can never hatch. Our friend is so well pleased with it, in comparison with other kinds, that he says he would pay double price for the seed rather than not sow it. The five bushels obtained last fall gave a return of about 25 bushels per acre, having been sown on five acres of new land early in September. It lodged badly during a heavy storm of rain and wind when just getting into the milk, but we were told by Mr. T., a young farmer a few miles south, who procured seed from the same source, that his crop stood up well. He, too, sows no other kind, as the Lambert wheat turned out much better on threshing than he anticipated in comparison with his Mediterranean.

But to come back (or rather go on) to the wheatfields in question. Mr. F. here followed the practice, quite common in this section, of growing

Wheat after Barley,

having harvested from the two fields (of 8 and 12 acres) seven hundred bushels of barley the last of July. Both fields were in corn last year and manured. The ground was plowed for wheat about the middle of August, and harrowed down lengthwise the furrow—the harrow passing twice over the surface. After lying some three weeks

Forty Bushels of Lime per Acre

was applied on the eight acre lot, and a portion of the other. It costs at the kiln nine cents per bushel in the stone, fresh-burned. We believe it was placed in bushel heaps, as drawn from the kiln, and allowed to slake and then spread with shovels. This lime was applied not only for the benefit of the wheat, but as a preparatory dressing for setting out another orchard, Mr. F. finding the apple crop usually very profitable, though neither of his orchards bear largely this year. Last year they paid at the rate of $100 per acre, and can now afford to rest, especially as apples are plentiful and low this year. There is but little muck on the farm in question, but from a small bed, drained several years ago, he drew a few loads on a part of the wheat lot, and some manure upon other portions where it seemed most requisite.

For mixing lime or manure with the soil, and also for pulverizing and leveling the same, our friend employs

Ide's Wheel Cultivator,

and thinks very favorably of the implement, though he acknowledges it pretty hard on the team. It does much better work than the gang-plow, which he says only operates well where nothing further is necessary—in a light mellow soil. We have used both, and partly agree with him, but rate the gang-plow higher, as with it we think one can get a good surface tilth by cross-plowing a partially decomposed sod, without tearing it up, easier than with the wheel cultivator. On a mellow soil, if not too mellow, it is very useful for covering grain, but for this purpose Mr. F. uses

Shares' Coulter Harrow.

After cultivating his wheat ground, he harrowed it down fine, then sowed on the seed, seven pecks per acre, and covered it with the coulter harrow, going once over the ground. If the harrow teeth were made of good steel, he thinks the implement one of the best of the recent inventions, and would willingly pay the increased cost. Now, one is about worn out in a single year, on a large farm, even if used only for covering grain.

It seems to be Mr. F.'s opinion, that the safety and consequent profit of wheat-growing rests largely on sowing a variety exempt from the midge. To show how opinions differ on the subject, we know a farmer in the next town, east, who succeeds so well with Soules' wheat this year that he has sown only that variety—sowing also after barley. Others will venture only the Mediterranean.

Of some further talk about sheep, the clover seed crop, manuring corn in the hill, salt for wheat, and various other topics, we have not time to write—and perhaps what we have written will never find place in the best farmers' paper out—the COUNTRY GENTLEMAN. ALBERT.

Western New-York, Sept. 1860.

[For the Country Gentleman and Cultivator.]

THE USE OF RAWHIDE.

How few persons know the value of rawhide. It seems almost strange to see them sell all of their "deacon" skins for the small sum of thirty or forty cents. Take a strip of well-tanned rawhide an inch wide, and a horse can hardly break it by pulling back—two of them he cannot break any way.

Cut into narrow strips and shave the hair off with a sharp knife, to use for bag-strings; the strings will outlast two sets of bags. Farmers know how perplexing it is to lend bags and have them returned minus strings.

It will out-last hoop iron (common) in any shape, and is stronger. It is good to rap around a broken thill—better than iron.

Two sets of rawhide halters will last a man's life-time—(if he don't live too long.)

In some places the Spaniards use rawhide log-chains to work cattle with, cut into narrow strips and twisted together hawser fashion. It is good to tie in for a broken link in a trace chain. It can be tanned so it will be soft and pliable like harness leather. Save a cow and "deacon's pelt" and try it. WILLIAM RHODES.

[For the Country Gentleman and Cultivator.]

HARVESTING AND UNLOADING HAY.

MESSRS. TUCKER & SON—In a letter to you the other day, I gave you a description of hooks for drawing hay from wagons. It was a description given me by a man from near Vevay, Ind., viz., the shape of a reap hook, from three and a half to four feet long, including handle. I found in working, I could better dispense with the handle, and had it cut off, and a hole put in the end of the hook for the rope to pass, about four feet long, connecting the two hooks. They are to be pushed down into the load of hay, one aft and the other forward of the load, straight down, and in pulling up by the rope, the points will pull toward each other with such force as to hold all the hay between them, and will take off an ordinary load of hay at two drafts—(there may be a fork full left after the last draft.) I had ropes around the rafters and cross-pieces of the barn, and hitched the block to first one and then another, as needed. Cannot get as much hay in same space as with forks, and it cannot be got out as easily. A good way is to tread it in with a gentle horse.

I sold my hay farm a few years ago, and am a little rusty on a large scale; I still cut about 30 acres. I did cut near 150 acres. I found I could save my hay prettier and better by hauling on wagons than in cocks—took it up after the rake and got very little wet. Cut first half the day, and in quite dry weather cut some in the evening to haul after the dew was off next morning. None out over Sunday. It should be bright and nice, to sell well. This summer, though it rained a good deal, I got none wet. When I have hay cut by machine, (I have none other now,) and a sudden shower comes on, I rake it, preferring spreading and turning it to dry, than to have it bleached by the sun, spread as it is by machine all over the ground. The rain beats it so close to the ground that it takes a good while to dry without turning over.

Madison, Ind. Wm. Hall.

[For the Country Gentleman and Cultivator.]

Pumpkins Seeds Injurious to Milch Cows.

Messrs. Editors—It is assorted by some that pumpkins, when fed to milch cows, are injurious. Different causes are assigned for their bad effects—some think they have a tendency to make the cow "lay on fat," and thus diminish the quantity of milk, while others contend that they increase the flow of urine, and consequently lessen the flow of milk. I am not a believer in either of these doctrines, but think them of great utility late in the fall, after the grass has become frost bitten and dry. But let this pass for the present—I am after the pumpkin *seeds*—the *diuretic*.

I notice in the Sept. number of the American Agriculturist some remarks of the Editor, upon a "correspondent's letter," in regard to the injurious effects of pumpkins, the *seeds* in particular, when fed to cows. And, although that journal does not regard the "writer's reasoning entirely sound," yet, thinks the "suggestion" in regard to feeding the *seeds*, "worthy of attention." I also read a very profound article, not long since, upon this subject of *pumpkin seeds*. The writer endeavored to show that because of their *diuretic* effect the flow of milk must necessarily be diminished, and greatly deteriorated. Now I wish to be enlightened a little upon one point touching this subject, and, as I am no "doctor," I hope some one who is, will give the desired information, for, as the season is close at hand when pumpkins are usually fed, I think *no* one should be unnecessarily frightened out of the use of so valuable an article of feed for milch cows. The point alluded to is this: Have pumpkin seeds *medicinal* properties, weakening, or do they cause *permanent* injury to the urinary organs, when eaten in quantities as small as are usually found in a mess of pumpkins given at one time, say from a peck to half a bushel? Or do they affect the animal more injuriously than *any other* food, *producing* a like flow of urine?

The Gentleman is already informed that I have practiced soiling my cows for the last four or five years, until after harvest, when they have the run of the meadows, but are invariably stabled nights, and fed with some kind of green food night and morning. When soiled exclusively, all their feed is given them in the stable. Now I have found that when kept on clover, corn or sorghum, or any other green food that is quite succulent, the flow of urine is *much greater* than it is in the fall after hard frosts, and the grass has become dry—the time of year when pumpkins are usually fed. The gutter behind my cows is tight, and all the urine runs back into it, and is taken out with the manure, by means of a scoop shovel and a wheelbarrow that is water tight, and I have always found the liquid part much the *largest* when soiling crops are the freshest and most juicy. Now is clover, corn, &c., *harmless*, and are pumpkin seeds *pernicious*, the former being the *most powerful diuretic*? That is the question.

I hope to be seasonably informed upon this subject, for most assuredly I shall feed my cows pumpkins, *seeds and all*, as soon as they stand in need of the article, and according to the *theory* of some, may find a portion of what should have been in the *udder*, behind my cows in the *gutter*.

Practical Observations.—The way pumpkins are often fed to cows, is enough to dry them up—they would be very foolish to "give down" under such treatment. The practice of some is to take a few green, watery things, destitute of richness or nourishment, and break them perhaps into two pieces upon a stone or the end of a rail, and then leave the cows to eat them the best way they can, and then hope to get in return an increase of milk, and in default thereof give judgment against the pumpkins, or their seeds. Let such slovens take good ripe, sweet pumpkins, and cut them up fine with a shovel, or what is better, with a root cutter, so that they can be easily eaten and relished, and feed them in clean mangers or boxes, so that each animal shall get her share, and, in my opinion, judgment will be reversed, and there will be less fuss about pumpkin seeds. J. L. R. *Jefferson Co., N. Y.*

[For the Country Gentleman and Cultivator.

HOOSE IN YOUNG CATTLE.

By the description given of the symptoms of M.'s heifer, I am induced to think it a case of the above named disease. It especially attacks young cattle, and usually during the autumn months, induced by the presence in the air or bronchial tubes of a minute filaria, (thread worms,) constituting as it were a variety of bronchitis, causing irritation or swelling of the pituitary membrane. If the symptoms are not relieved, the animals lose flesh very rapidly. For this purpose, give half ounce doses of oil of turpentine, dissolved in three ounces of linseed oil—to be repeated again in two days. Keep the animal in at night, and give oil-cake and good feed; and if the beast is weak, give a few doses—two drachms each—of sulphate of iron and gentian in some warm ale or porter, which may be sweetened with molasses. R. M'Clure, V. S. *Phila.*

[For the Country Gentleman and Cultivator.]

NATURAL LIFE OF THE HONEY BEE.

The majority of persons who have the care of bees, entertain the idea that the worker-bees live many years. Their conclusion is drawn from the fact, that colonies sometimes inhabit the same domicil a long period—15 or 20 years—never thinking that as fast as the bees die off naturally and from other causes, they are continually replaced by a new progeny. The natural life of the honey-bee worker does not exceed six months, and from recent experiments, I believe does not exceed in the summer season three months.

By the aid of the Italian or Ligurian bee, this may be easily and satisfactorily tested. On the 2d of July last, I gave to a very powerful stock of native bees a pure Italian Queen. To-day, Sept. 15, this stock was examined to ascertain what proportion of the bees were of the Italian race. The stock is in a Langstroth Hive. Taking out the frames one by one, both sides of each comb were carefully inspected, and so far as I could ascertain, at least nine-tenths of the bees were purely Italian.

Also on the 17th of July, I gave an Italian Queen to another stock of native bees. This stock was also examined to-day in the presence of a friend, who assisted me in the examination. Examing the combs as before, we did not find in this stock *a single native bee!*

This change has taken place, as will be observed, in less than two months. Since the 17th of July, I have taken out of this colony combs of maturing Italian brood—giving them to other stocks—more than enough to make a good colony of bees. Thus it will be seen that the natural life of the honey bee in either of these instances would scarcely exceed three months; also, that it requires only a few months to change an apiary of native bees to those of the Italian race.

Middleport, Niag. Co., N. Y. M. M. BALDRIDGE.

Harvesting Wheat.—John Johnston, in a letter to the N. Y. Observer, says—"Wheat ought to be cut in a raw state, as the wheat is of much better quality and much less lost by shelling. The straw is much better also. It ought to be bound up as fast as cut down, and shocked up to dry in the shock, which generally takes eight or ten days of dry weather; but that depends upon how green or raw was the state in which it was cut. If cut just when it ought to be, it would require more than nine days to dry it, but those having a large crop to cut cannot cut it all at the time it ought to be. If a 'Resident of Connecticut' should let his wheat stand until it was ready to bind up and draw in as soon as cut, he might draw in a good large crop of straw, but a great deal of wheat would be left in the field."

THE TWENTY-EIGHTH YEAR OF THE CULTIVATOR.

New Premiums for 1861!!!

With the present Volume of THE CULTIVATOR, the EIGHTH of its *Third Series*, and the TWENTY-SEVENTH since its original establishment, the PUBLISHERS introduced some improvements, which appear to have met with universal approval—for example, the enlargement of the Type and Page to their old size when its Subscription Price was One Dollar per annum—and they point to the Contents of the Volume now closing, as comparing favorably in Amount, in Variety and in PRACTICAL VALUE of its Contents, either with any previous year in its long and popular career, or with any contemporary now published, for which twice the price is charged.

To the ANNUAL REGISTER for 1861, they also ask the attention of their friends, as unsurpassed by any Number that has preceded it; and without farther preface, they proceed to the announcement of their

Terms and Premiums for the New Year:

The Price of THE CULTIVATOR to all parts of the United States is uniformly FIFTY CENTS a year—to the *British Provinces*, where we have to prepay American Postage to the lines, FIFTY-SIX CENTS a year—all subscriptions beginning with the January number.

We shall continue to send to clubs, as heretofore,

Ten Copies of THE CULTIVATOR and Ten of the ANNUAL REGISTER for 1861, with an ELEVENTH COPY of both as a Premium to the Agent, for FIVE DOLLARS,

Prepaying ourselves the postage on the ANNUAL REGISTER—which, as our readers are now generally aware, is the title of a Premium Volume issued each year, mainly for presentation to CULTIVATOR subscribers, although it commands a large sale to others at its retail price—*Twenty-five cents per copy.* The Number for 1861, just issued, and a summary of the contents of which appears on another page of this paper, contains no less than *One Hundred and Forty Engravings*, and over a hundred pages of reading matter exclusive of the Almanac for the year.

AS PREMIUMS FOR LARGER CLUBS we have made arrangements with B. K. BLISS, the well known Seedsman of Springfield, Mass., to supply us with various assortments of

FLOWER AND VEGETABLE SEEDS,

As put up by him for mailing to all parts of the country for several years past, with unparalleled success and satisfaction to his numerous customers. The Assortments are:

FLOWER SEEDS.

1. Twenty Choice Varieties of Annuals.
2. Twenty Choice Varieties of Biennials and Perennials.
3. Ten Extra Fine Varieties of Annuals and Perennials—embracing many of the new and choicest in cultivation.
4. Five very Choice Varieties, selected from Prize Flowers of English Pansies, German Carnation and Picotee Pinks, Verbenas, Truffant's French Asters and Double Holyhocks.
5. Fifteen very Select Vorieties of Green House Seeds.
6. One Hundred Varieties of Annuals, Biennials, and Perennials, including many new and choice varieties.
7. Fifty do. do. do.

VEGETABLE SEEDS.

1. Twenty Choice Varieties, including those most in demand in every Garden, with the exception of Peas, Beans and Corn, which cannot be sent by mail on account of their weight.
2. Forty-five Choice Varieties, including a still wider assortment than that above named, and with the same exception as regards Beans, Peas and Corn.
3. Collection to go by Express, containing a complete assortment of everything wanting in an ordinary garden, in quantity sufficient for a family of moderate size—for instance a quart each of four varieties of Peas to ripen in succession, and other seeds in proportion.
4. Collection to go by Express similar to No. 3, but on a larger scale throughout, and including about SEVENTY-FIVE VARIETIES!

I. These different assortments may be recommended as judiciously selected, well put up, reliable in character of seed, and in all respects worthy of confidence, and we will send Postpaid to the Agent from whom we receive TEN DOLLARS *for Twenty copies of the Cultivator and Register for* 1861—either ONE of the following Assortments;

No. 1--Flower Seeds.
No. 2--Flower Seeds.
No. 3--Flower Seeds.
No. 4--Flower Seeds.
No. 1--Vegetable Seeds.

II. The Agent sending THIRTY SUBSCRIBERS and FIFTEEN DOLLARS, may select either of the above named assortments, and will receive in addition a Free copy of the CULTIVATOR and REGISTER for himself.

III. The Agent sending us FORTY SUBSCRIBERS and TWENTY DOLLARS, will receive a Free Copy of the CULTIVATOR and REGISTER for himself, and may in addition select any TWO of the above Assortments—or in place of the latter, either assortment

No. 7--Of Flower Seeds, or
No. 2--Of Vegetable Seeds.

IV. The Agent sending us FIFTY SUBSCRIBERS and TWENTY-FIVE DOLLARS, will receive a Free Copy of the CULTIVATOR and REGISTER for himself, and in addition either of the following as he may select:

The First FOUR Assortments of Flower Seeds; or any one of them, together with either No. 5, or No. 7—
Or, Any two of them, together with No. 2, of Vegetable Seeds—
Or, No. 3, of Vegetable Seeds, with either No. 1, 2, 3, or 4 of Flower Seeds, as preferred.

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Assortment No. 6, of Flower Seeds—or
Assortment No. 4, of Vegetable Seeds, as may be preferred.

☞ In any case where extra copies of the CULTIVATOR and REGISTER are preferred, they, or AGRICULTURAL BOOKS to an equivalent value will be substituted upon the request of the Agent.

☞ Agents who wish the REGISTER to supply to every subscriber as fast as they take his name, can remit for them at the rate of Fifteen Dollars a hundred, (15 cents apiece,) and on completion of their lists, send the remaining 35 cents for each subscriber, when the premium due upon the whole will likewise be adjusted. This has proved an excellent plan; each subscriber, as soon as he pays his Fifty Cents, receives one-half his money back in a Twenty-five cent book, and the Agent has no farther trouble in the collection of the money. Address

LUTHER TUCKER & SON,
Publishers of THE CULTIVATOR,
395 Broadway, Albany, N. Y.

☞ Extra numbers sent free as samples.

[For the Co. Gent. and Cultivator.]

The Trailing Sanvitalia.

Sanvitalia Procumbens.

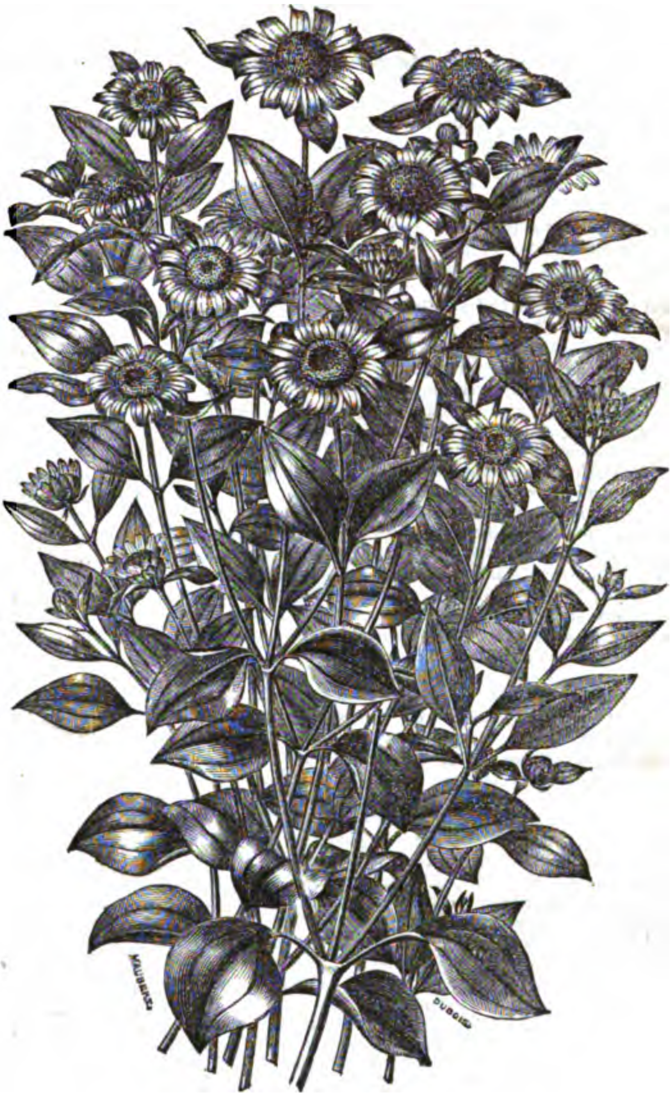
Among annual flowers of recent introduction to our gardens, this one deserves some commendation.

It is a trailing plant about a foot in height, growing so bushy as to form a dense mass quite covering the ground; the leaves are small, and the whole plant is covered with yellow flowers about an inch in diameter, resembling small sunflowers—indeed they may be called miniature sunflowers. It is an excellent thing for covering rock work, grows and blooms well in the shade, and makes fine masses when planted in beds, either in the flower garden or on the lawn.

It blooms constantly from July until frost comes, and is quite useful for autumnal bouquets; in the cut state it remains a long time fresh, as the stems emit rootlets in the water.

It may either be sown in the open border with other hardy annuals, or be started in frames and transplanted. The latter method is preferable for all annuals where an early display of flowers is desirable.

The wood cut representing some cut bran ches, conveys a very good idea of the comparative size of the leaves and flowers, but gives a very slight indication of the dense trailing habit of the plant, which constitutes a considerable share of its merit.



The Trailing Sanvitalia.

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[For the Co. Gent. and Cultivator.]

Verbenas, &c., from Seed.

Your Flower Department says that Salvia splendens may be propagated by slips, &c. Dry as our season has been, we have it finely in bloom from *seed*, gathered by my wife last year. We have also had verbenas without number, and in great variety, from seed gathered by herself. She got the hint for the verbenas from the Co. Gent., and concluded to try it also on the Salvias. R. S. E.

St. Louis.

WHITE AMARANTH.

Messrs. Eds.—We have a curious weed that starts late, and resembles a little what is called the red-root pig-weed; it branches out very thickly, so that when loose from the ground it is about round, and in size from a pail to a two-bushel basket. As soon as it gets ripe, or we have frost to kill it, it loosens at the surface of the ground, and the wind rolls it in every direction until it meets with some obstruction as a fence, when it will pile up in wagon loads, and lie until the wind changes, and then it will make another move. We call it the "tumble weed." When in motion it will scare a horse worse than a moving wheelbarrow. Enclosed is a bit of the weed, and also a head of hedge-row wheat, which a few years ago did well with us here, but seemed to run out, and there is none raised now except a few scattering heads among other wheat. A. Moss. *Belvidere, Ill.*

This is the Amarantus albus, or white amaranth, a weed nearly allied to the pig-weed amaranth or *Amarantus hybridus*—both are very common and troublesome weeds throughout a large part of the Union—or rather they are "troublesome" to thriftless farmers, who allow themselves to become overrun with them.

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Handsome Apples.—Enclosed I send you a few apples of a new variety, originating on the farm of my father-in-law. They are very valuable for cooking, always fair, and a good bearer. Good through September. N. House. *Hillsdale, N. Y.* [These apples were very handsome, of fair quality, and we should think worthy of propagation by those who do not object to the color of the flesh, which is quite red.]

Mr. Hitchcock's Sale of Sheep.—The sale of improved stock advertised in the Country Gentleman, to take place at Ash Grove, New Preston, Ct., by G. C. Hitchcock, on the 26th ult., was, from circumstances which Mr. H. could not control, confined to sheep, Mr. J. R. Page of this State acting as auctioneer. About 90 head of Cotswold sheep were sold, realizing about $2,000. The highest price paid for a single ram was $150, by Henry Jordan of Kennebunk, Maine.

[For the Country Gentleman and Cultivator.]

NEW-HAMPSHIRE STATE FAIR, 1860.

The New-Hampshire State Ag. Society held its Eleventh Annual Fair in the city of Manchester, on the 2d, 3d, and 4th of October. The rain on the afternoon of Monday was a serious damper to the hopes of all parties concerned, but during the night the storm cleared off, and Tuesday and Wednesday, as far as the weather was concerned, were everything that could be desired. Thursday was cloudy but mild; late in the afternoon a light rain set in, but the show was pretty much over.

The concourse of people that attended during the three days was large indeed. The schools of the city were closed, and the numerous factories shut down their gates, and the operatives had a holiday. These, with others of a city of over 20,000, in addition to the multitudes from every part of the State and some of the adjoining ones, furnished an attendance that probably has never been outnumbered at any preceding fair in New-Hampshire.

The best of order and good nature prevailed. Drunkenness, fighting and gambling, if any, were elsewhere than about the show grounds; and as far as we could learn up to 2 o'clock P. M. of Thursday, but few accidents had occurred, and those of a very light description.

The show of horses was large, embracing the finest specimens of the various crack breeds, now so well known all over the country, but we cannot here give a catalogue of the numerous stallions, matched and working horses, or family horses, mares and foals, geldings, colts, &c. The show of neat stock was much less than on some former occasions—but the deficiency in numbers was made up by the extra quality of the animals. Good judges of cattle said they had never seen handsomer oxen, bulls, or young stock than were on the ground. David Towle, Esq., of Hampton, had on exhibition a pair of six year old Durham oxen, measuring 10¼ feet in girth, weighing 8,087 pounds. They are well matched as to color, red, not quite as dark as Devons, scarcely differing an inch in girth. He has been offered $1200 for them. Wm. F. Jones of Durham, had on the ground a splendid pair of "fat oxen," six years old, measuring 8½ feet in girth, weighing 5,500 pounds, seven-eighths Durham. Mr. Jones reared them from calves. Nathaniel G. Davis of Lee, had on the ground a splendid pair of three year old steers, seven-eighths Durham, weighing 3,758 pounds. But the most attractive animals of the show were a pair of twin heifers of Col. J. B. Wentworth of Rollinsford; they were sixteen months old, weighing 2,080 pounds. In color, brindled, with a star of white in their foreheads, as also a few spots of white about their legs and bellies—but these marks correspond on each. When one year old, in weight, they did not vary a pound—and at no time since their birth have they varied in weight so much as ten pounds. The mother of these heifers was a twin, and the year previous to the birth of these brindled heifers, she brought forth twins, one of each sex. The heifers are three-fourths Durham.

Fine specimens of sheep of various breeds and crosses were on exhibition. We think the tendency of many of our flock-owners, is towards the growing or rearing of mutton, rather than fine. wooled sheep. Our numerous villages, manufacturing places and cities, afford good markets for mutton and lamb, and usually at satisfactory prices, at least for the sellers. Swine were on hand in strong force and of fine proportions. If all the porkers of our State are like those on exhibition, the last traces of the land-shark and pike varieties of hogs have disappeared from among us.

The display of farm products was very fine; one sample of spring wheat was labelled 50 bushels per acre. Corn large, ripe, and of a golden yellow. Potatoes in great variety, some of which might well compete with those grown in California. Pumpkins, squashes and melons, "too numerous to mention," and of sizes larger than I choose to name. Fruit was never better, finer, or of larger size in the "Old Granite State," than in this year of Grace, 1860. The hen-fever having subsided, the show of fowls was nearly whittled to a point. A small coop of dorking fowls, two pairs of geese, and a pair of muscovy ducks, was about the total of this department of the fair.

There was a large display of agricultural implements. Among the mowing machines, we noticed Fisk Russell's machine, manufactured by A. Blood of Manchester; different sizes, for one and for two horses. A newly invented one by A. M. George of Nashua, N. H., two sizes. Ketchum's improved, two sizes, manufactured by Nourse, Mason & Co., Boston and Worcester, Mass. Manny's mower and reaper, for one and two horses, and Whitcomb's horse hay rake, manufactured by Abzirus Brown, Worcester, Mass. The Buckeye mowing machine by John P. Adriance of Poughkeepsie, N. Y., and Worcester, Mass. Wood's improved mowing machine, manufactured by Walter A. Wood, Hoosick Falls, N. Y. All of the above machines were accompanied by the manufacturers or their agents, being well supplied with certificates, &c., in proof of their good qualities, ease of draft, &c., &c., and from the crowds of farmers examining them through the entire fair, and the favorable opinion of them frequently expressed, we predict the haying season is not far distant, when a large portion of the grass in New-Hampshire will be cut by horse or ox power instead of the scythe. The mower, the horse-rake, and hay caps, will place our farmers in nearly independent circumstances, as regards the weather and high priced day laborers. Of plows, there were none exhibited showing improvement over those of former years. We regret there was no exhibition of the "Universal Plow," the invention of Col. F. Holbrook of Vermont, but we predict *that plow* will yet *make its mark* on thousands of our farms. Several corn-shellers were on hand. The "Young America," if it had been a breathing animal, would have stood "a right smart chance" of being smothered by the dense crowd who thronged around to witness its practical operation during the three days exhibition; manufactured by Edgerly, Davis & Co., at Fishersville, N. H. Our old friend, Rufus Nutting of Randolph, Vt., was on hand with his ingeniously made winnowing mill. While at Manchester, he took the machine to a farmer's, a short distance from the show-ground, and cleaned up some fifteen bushels of rye at the rate of over 100 bushels per hour. His mill was one of the great attractions of the fair. M. F. Colby of Londonderry, exhibited a "churn and butter worker," which promises to become a favorite with butter makers. He exhibited a beautiful sample of butter, a portion of several pounds, churned on the morning of the 4th. The butter was churned inside of three minutes, salted, worked, and moulded into pound lumps in less than ten minutes from the time the cream was put in the churn. Human hands nor fingers had not touched the butter when exhibited, and it was none of the greasy, mottled stuff, that too often passes under the name of butter, but yellow, granular in fracture, solid and sweet. S. S. Clark of Manchester, exhibited a newly patented hay cutter, thought by all who saw it operate, to be a No. 1 implement. In operating, the cutters act precisely like those of shears. It is self-feeding, and there is no danger of getting one's fingers clipped while working it. It can easily be guaged so as to cut of different lengths. A strong, durable, efficient and cheap hay and straw cutter. When not in use it is easily "locked up," so that children cannot tamper with it to the manifest danger of "fingers and hands."

Upon the whole, our people have great encouragement to strive for farther improvement in everything connected with our agricultural interests. Levi Bartlett.

Oct. 5th, 1860.

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The Ohio State Fair.—This Fair, the *Ohio Farmer* states, "was excellent in nearly every department, and the management better than ever before; and what is equally to the purpose, we have never visited a Fair where the people seemed to study all the departments with such interest and industry. This was particularly true of the agricultural implement department. The large hall and grounds devoted to this interest, were continually crowded, even more than the horse-ring. The receipts, we understand, were about $12,000, large enough to pay expenses and have a small surplus left."

[For the Country Gentleman and Cultivator.]

MICHIGAN STATE FAIR.

The twelfth annual exhibition of the State Agricultural Society was held at Detroit, Oct. 2—5, on the same grounds as last year. The weather, though threatening at first, proved very favorable, and the Fair was a decided success. Great credit is due Mr. Philo Parsons, the chairman of the business committee, for his unwearied exertions, both in reducing the expenses and adding to the attractions of the occasion, which would generally be considered rather a difficult feat.

It being noon when we arrived, our steps were first directed to Dining Hall, the arrangements of which gave us much inward satisfaction.

The next Hall in order, and in most admirable order too, was Floral Hall, which was beautifully decorated, and overflowed with flowers, paintings, fancy articles, and people. In the centre was an aquarium filled by Mr. George Clark of Ecorse, and the State Geologist displayed an interesting collection of minerals in one of the wings. We noticed in particular, some very fine specimens of marble from Crawford's quarry at Pt. Adams, on Lake Huron.

We then dived into Mechanic's Hall, and were first brought up by two patent Water-Drawers, which kept running both water and a most lively opposition to each other. There was a great variety of machines and labor-saving inventions here, and outside and around the Hall the agricultural implements were too numerous to mention. The eloquence displayed by the exhibitors of all these articles was of a high order of voice, if not of merit.

The fruit was very properly arranged by itself in a large tent, where every facility was afforded for studying pomology and tantalizing the palate.

The products of the field, the garden, and the dairy, exhibited in Agricultural Hall, made a creditable show, though not as extensive as on some former occasions. Oakland county rolled up a cheese weighing 420 lbs., which was probably good for its size.

The show of Domestic Manufactures was very fine, and reflected much credit on the industry of "our folks." There were some excellent samples of salt from the Saginaw salt springs, which, as soon as it comes into general use, cannot fail to improve the butter made in this State.

The Messrs. Sly of Plymouth, J. B. Crippen of Coldwater, D. M. Uhl of Ypsilanti, and John Allen of Utica, were among the most prominent exhibitors of blood stock, of which there was a grand display. Wm. Smith, and D. W. Heath and Brother of Detroit, divided the premiums on the finest collection of fat cattle ever seen here. One cow, named the World-Beater, weighed 2,100 lbs., and a Durham ox went up to 2,800 lbs.

The exhibition of horses was extensive, embracing specimens of Black Hawk, Morgan, Messenger, Eclipse, Bashaw, and Hambletonian stock. N. Weaver of Clinton, had a gigantic Cumberland colt, of English draught-horse extraction, and A. McKay of Napier, C. W., a small, compactly built, very stout, and pure black specimen of French stock.

There was a good display of swine, particularly the Essex breed, which seems to gain ground as well as flesh among the farming community. The prejudice which has long existed against "black pigs," must be wearing away.

The show of sheep and poultry was not very large, but comprised some very good specimens of the different breeds.

Among farm implements, D. C. Smith of Adrian, exhibited a remarkable corn-husker, and J. S. Gage of Dowagiac, a recently patented seed-sower and roller, which last resembles Crosskill's clod-crusher somewhat.

The annual address was delivered by Hon. Cassius M. Clay, so eminent both as a politician and a stock-breeder, and so well known to the readers of the Country Gentleman. He dwelt with much interest and enthusiasm on the progress of agriculture in our land, and evidently believes in the freedom of country life, as well as in that of the soil.

The Fair closed with the re-election of the present officers of the Society by acclamation, and, as above remarked, has been most successful in every respect. J. L. T.

DEEP PLOWING AND MUCK.

A correspondent of the Boston Cultivator, writing of a visit to Vermont, speaks of a farmer in Caledonia county, who "a few years ago discovered, what many farmers have yet to learn, viz: that he possessed two farms in one—an *upper* and an *under* one. His upper farm is a light, sandy soil, which has been cropped for a long series of years. Immediately beneath it is a subsoil of marly loam. By deep plowing and thorough pulverization, these soils are made capable of producing paying crops of all kinds. His invariable rule is twelve inches." The farm also contains a valuable muck bed, which has been used in a variety of forms: in its crude state upon grass and grain with considerable success; in composts with barnyard manure for corn and potatoes, and also for the latter, as well, after it has passed the laboratory of the hog-pen. Where it had been applied to a field of spring rye upon a sandy ridge, its effects were apparent in the increased length of the stalk and fulness of the heads, indicating full one-third more than where it had received no dressing."

These two means of improvement would bring up many a worn farm to a high state of productiveness; and the sooner farmers learn to employ all the means of improvement within their own limits, the sooner will they be able to produce profitable crops. To give thorough cultivation and more manure, will increase the crops, whatever may be the season which prevails. With plenty of vegetable matter, like muck, there is no danger of injuring the soil with which it is mixed by deep plowing.

[For the Country Gentleman and Cultivator.]

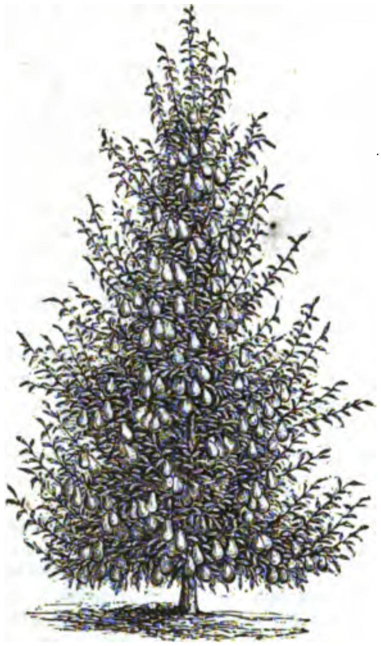
ENGLISH POTATOES.

Messrs. Tucker & Son—According to promise I forward you a sample of the Lapstone Kidney potato, and the Stone's Seedling. They were raised at Hull, in Yorkshire, England. The former was raised by a shoemaker, and called after his favorite tool, the lapstone, and when well grown it resembles it. It is considered the best general potato in England, and always commands two pence stirling a peck more than any other potato. It has been tried here for a few years with but poor success, owing to its culture not being known. We have succeeded well with it. It is a potato that must be planted early—as early in April as possible. If allowed to sprout in the cellar, it will not do. It requires a good rich soil—in fact the richer the better. It is very difficult to cook, it being so mealy. As to the flavor, I shall leave you to judge of it. It is the most palatable potato I have ever eaten, and all who have eaten it say the same. In fact it is a potato that every private gentleman should have on his table. I do not think it will make a market potato—it requires too good land to make it pay, although I have sold it for twenty-five cents a bushel more than any other potato this season; it does not disease.

The Stone's Seedling is a round potato, medium size; its cooking qualities you will find equal to the Lapstone Kidney. Its skin denotes it to be a cooker. It is a most prolific yielder, but rather small for a general marketer; with high culture this may be obviated. It being a very hard fleshed potato, I think it would do well on loose swampy land. You will notice in cutting one how hard and crisp it is. Gerald Howatt.

Newburgh, Orange Co., N. Y.

We have tried the potatoes sent us by our correspondent, and find them of excellent quality—as mealy, but not as white fleshed, as the old Carter potato formerly grown in this vicinity.



DWARF PEARS.

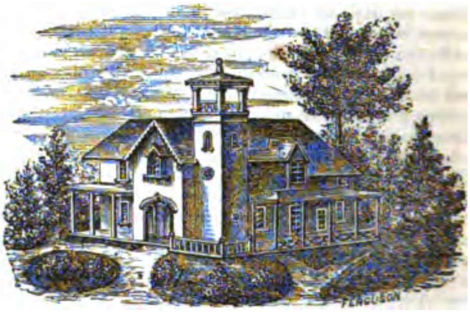
"Are dwarf pears successful?" This question is asked many thousand times, and the correct answer would be nearly the same as to the question, "Is the business of a merchant successful?" There is, however, this difference in favor of the dwarf pears, that success depends mainly, or almost wholly, on good management, while the merchant often fails from causes beyond his present control. It is said that out of every hundred persons who engage in mercantile pursuits, only five ultimately succeed. About the same proportion flourish and bear of all the dwarf pears set out. And it happens that just about that proportion of all that are set out receive good broadcast cultivation. Formerly many died from the use of bad stocks, and the selection of unsuitable varieties, but this evil has nearly disappeared. The fault now rests mainly with the management, when such free growing sorts as the Angouleme, Louise Bonne, and Winkfield are selected.

In comparing their management with the business of a merchant, it must not be supposed that to produce successful growth requires the deeply laid plans, eminent skill, and extensive knowledge that a successful merchant must possess. On the contrary, well selected dwarf trees will generally do well if treated as well as a good farmer treats his corn and root crops—that is, by manuring annually, and by mellow, clean culture. It is true that a general knowledge of the principles of vegetable growth, and an extensive experience in the application of these principles will often be of great service when new treatment is required for different localities, or when new maladies appear, but they are not indispensable to the ordinary routine.

While on a visit to the grounds of H. E. **Hooker** of Rochester, last autumn, he showed us trees of the Louise Bonne of Jersey which had been carefully removed when quite large, and which were two years transplanted. They were bearing about a bushel each of large, handsome, delicious specimens. "That is the way," said he, pointing to these loaded trees, "that dwarf pears '*humbug*' me every year!"—alluding to the frequent assertion that they have proved a failure.

We are informed that T. G. **Yeomans** of Walworth, Wayne Co., continues to be more and more successful with them. The past autumn he obtained *five hundred dollars* from a third of an acre of his Angoulemes; and, as we are informed, received *twenty-five dollars* a barrel for the fruit.

During a visit the past autumn to the nurseries of **Ellwanger & Barry** of Rochester, we examined the same quarter acre of dwarf Virgalieus which two or three years since, when four years old, yielded at the rate of five hundred dollars per acre. A long row of trees of the Louise Bonne of Jersey, then several years old, which we found by a careful figuring yielded at the rate of fifteen hundred dollars per acre, were this year producing again with increased abundance, and growing with undiminished vigor. The figure at the head of this article is a nearly exact copy of one of the best of these trees, although there was but little difference in them in vigor and productiveness. Good management and good cultivation told the whole story.



DESIGN FOR A FARM-HOUSE.

For a locality which commands a wide prospect, or one where an outlook over neighboring obstructions is desired, the design here given may prove a satisfactory one. It is intended for a farm-house of the larger class, and if built of solid materials might properly be called a villa. It would, however, make a very satisfactory dwelling built of wood. The accommodation afforded in the ground plan, (fig. 1,) is sufficient for a large family living in liberal style. The office at the right of the hall has a circular stair-case in one corner, leading to a small library or study, which can also be reached from the upper hall. The two rooms taken together make an arrangement which every "country gentleman" who loves to investigate the sciences which pertain to his sphere of activity, will particularly enjoy. The dining-room and kitchen accommodations are ample, and the stair-case hall through the centre of the house makes it cool and airy in summer, and is, besides, very convenient. The chamber plan (fig. 2,) furnishes eight sleeping apartments, besides the study. The obser-

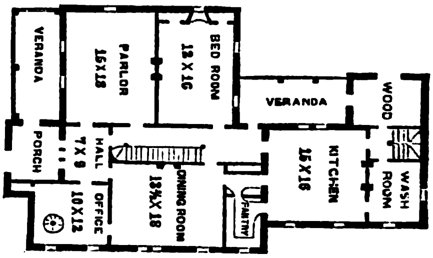


Fig. 1—Principal Floor.

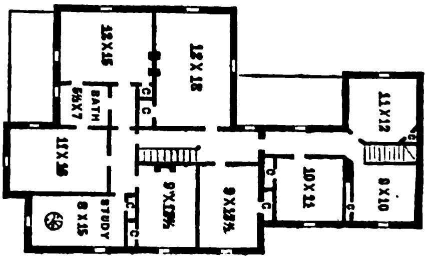


Fig. 2—Chamber Plan.

vatory is reached by circular stairs from the study. This house can be built of wood for not far from $2,000, but at this price there would be no scope for any superfluities of decoration, though every part would be built durably and tastefully.—*Tucker's Annual Register.*

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[For the Country Gentleman and Cultivator.]

ALSIKE OR SWEDISH CLOVER.

Of the above named clover, the Patent office Report of 1854 says:

"It is best adapted to moist and strong soils, and has the property of self-sowing, when the flowers are left to to mature, which will cause it to endure fifteen, twenty or more years. The usual course to pursue, is to cut it once a year for hay, afterwards leaving it for pasturage. Its flowers, which put forth in June in great profusion, resemble in shape those of the common white clover, but are larger and of a rosy tint, of a sweet agreeable odor, and excellent forage for bees. It may be sown with autumn or spring grain; with the latter it is preferable, to prevent winter killing."

In the Canadian Agriculturist of Feb., 1858, appears an article on this variety of clover, by Patrick R. Wright, more than sustaining all that is said in its favor in the Patent Office Report. A lengthy extract from Mr. Wright's communication can be found at page 394, No. 25, vol. 11, of the Co. Gent., from which I make some extracts. Mr. W. says:

"Both cattle and sheep are so fond of it, that the common kind of clover, or timothy and clover mixed, are quite disregarded if access can be had to the Alsyke, both as pasture and hay. The common red clover will last only two years in perfection, and often, if the soil is cold and moist, nearly half the plants will rot, besides it is liable to be thrown out or winter killed, and in the second year bald patches will be found in every part of the field, besides that in September and October many crops left for seed are lost in consequence of the heavy rains during that period; while the Alsike clover, on the contrary, ripening its seeds perfectly the *first crop*, and continuing its vigor much longer, much risk and expense are avoided, and a larger profit accrues; and when this plant is once established, it will remain for many years in full vigor, and produce annually a great quantity of herbage of excellent quality.

"Four years ago I obtained from Messrs. Lawson, Edinburgh, five pounds of seed, which I sowed on one acre, and as I was cautious in my experiment, mixed it with about two or three pounds of timothy. It stood the winter admirably, and I cut the following year *not less than three tons* of the finest clover hay I had ever seen. In the end of June, and before ripening its seeds, I expected to have the second crop run to seed, which it did not, but produced an unparalleled mass of feed so close and even, and about one foot in length, that I could have fancied it would bear one up to walk over it. The second year I had an equal quantity mixed with timothy—the clover ripening to suit the time for cutting the timothy exactly. * * The third cutting last year was heavier than either of the former. * I feel confident that red clover, both as a mixture with timothy, and for forage by itself, will soon be numbered among the grasses that were in Canada."

Mr. Wright, before giving the above letter to the public, had experimented four years with the Alsike clover; he is a practical farmer, and had no inducement to *overdraw* his picture. How far this variety of clover may become a substitute for the other varieties now cultivated, can only be ascertained by carefully conducted experiments. In the spring of 1859, I procured a small package of Alsyke clover seed from the Patent Office. It was sown in June, and as it proves, not on a good clover soil. Very little of the seed vegetated, and other grasses sprang up, so that the Alsyke made rather a dwarfish growth this year, growing from 12 to 20 inches long. It appears to be a hybrid, an amalgamation between the red and white, or Dutch clover.

Mr. Goodale, Secretary of the Maine State Ag. Society, forwarded to me last spring about an ounce of seed, which was sown on good land with oats; when harvesting the oats I found stalks of the Alsyke in blossom, of about 31 inches high.

From my limited acquaintance with this clover, I do not feel authorized to recommend its general culture to the exclusion of the varieties so long cultivated among us. But I have no hesitation in giving it as my opinion, that as a forage plant for the summer, or winter keep for sheep, there can be nothing better, and that it would "afford an excellent forage for bees," and its durability in the soil, gives it a preference over the red clovers. With this I forward you a sample, saved as fodder, and a few stalks pressed between papers. Upon examination, you will notice its superabundance of heads and blossoms, its numerous leaves, and fine stalks and branches, and in conclusion, I think you will coincide with my views in regard to its value as a forage plant for "sheep and bees," to say nothing about cattle and horses. LEVI BARTLETT

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VALUABLE RECIPES.

TO PRESERVE EGGS.—Provide a small cupboard, safe, or tier of shelves; bore these shelves full of holes one and a quarter inches in diameter, and place the eggs in them, point downwards. They will keep sound for several months. Other modes, such as packing in salt, &c., depend for their success simply on placing the points down; the shelves are more convenient and accessible.

ANTS.—These animals are known to avoid drawers and boxes made of red cedar. Red cedar shavings placed in them or on shelves, will repel them.

WALL PAPER is often cleaned by the use of wheat bran, but common wheat bread is decidedly better.

TO KEEP PRESERVES.—The paper which is usually pasted over jars of preserves, is porous, and admits air. To render it perfectly impervious, and as tight as a drum, apply the white of an egg with a brush to the paper before covering the jars, overlapping the edges an inch or two.

KITCHEN ODORS.—A skillful housekeeper informs us that the unpleasant odors arising from boiling ham, cabbages, &c., is completely corrected by throwing whole red peppers into the pot—at the same time that the flavor of the food is improved. We have heard that pieces of charcoal will produce the same effect, but we have not seen it tried.

TO TAKE GREASE OUT OF SILK.—Rub a lump of magnesia wet over the spot; when dry, brush off the powder, and no grease will be seen. It may be applied to other stuffs. This is an old and well tried remedy; but there is a newer and better remedy, but not so thoroughly proved,—this is *Benzine*, the most complete substance to cleanse all fabrics, we have ever seen.

CARPETS.—Every one knows that the daily dust arising from sweeping carpets, causes a permanent injury to furniture, books, pictures,—and the lungs. It is an old but good way to sprinkle the floor first with damp tea-leaves, and then sweep with a bristle brush; but latterly we have found it much easier and more convenient to use one of the new revolving *carpet-sweepers*, which takes up the dust and puts it away in a box without its rising at all, and without using the moistening application at all. They are especially suited to libraries, offices, cabinets, &c.

HAIR-BRUSHES are best cleaned by washing them in saleratus water, which removes all the oily coating.

RAT-TRAP.—Cats are the best that we have found after many years experience—and next to cats, the chaff-trap. This is best made by partly filling a large smooth kettle with water, and then covering with a few inches of chaff. The first rat that gets in makes a great outcry, which brings others to share his fate.—EDITORS COUNTRY GENTLEMAN.

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☞ During the month of September, 2,646,570 bushels of wheat and 194,775 bushels of corn, and 214,320 barrels of flour, were shipped from New-York to Great Britain.

DISCUSSIONS AT THE STATE FAIR.

REPORTED EXPRESSLY FOR THE CO. GENTLEMAN AND CULTIVATOR.

Third Evening—Culture of Wheat.

The regular subject for discussion this evening was "The Culture of Wheat—Is it Desirable for the Farmers of Western New-York to Increase the Culture of Wheat? Are there Other Crops that Could be Substituted that would Enable the Farmer to Secure Equal Profits and Preserve his Land in Better Condition?"

LOUIS E. HESTON of Alabama, Genesee county, N. Y. thought it desirable to increase the cultivation of wheat. Wheat afforded more profit for the labor than other crops. His soil is a clay loam, resting on limestone. He breaks up sod land and sows it to peas; then plows the ground and drills in wheat, two bushels per acre. Since the advent of the midge, he sows little but Mediterranean variety. Gets about thirty-five bushels per acre. Keeps a large number of sheep. Feeds them with straw and one bushel of oats to one hundred sheep per day. Also feeds them cornstalks and cuts them when he can. Buys bran for his sheep when cheap enough. He seeds down with the wheat; one peck timothy sown in the fall with the wheat, and six quarts of clover per acre sown in the spring. Does not often mow clover; plows it under as manure for wheat. He has one hundred and sixty acres of arable land, and sows about fifty acres of wheat each year and ten acres of corn. Thinks he can continue this without injuring his land.

T. C. PETERS remarked that it was getting to be a common practice in the wheat districts, to sow timothy in the fall and clover in the spring.

Mr. **BOWEN** of Medina, N. Y., said some of his neighbors had raised thirty-five bushels of Mediterranean wheat after barley. A great breadth of land had been sown to wheat this fall.

Gen. **HARMON** of Monroe county, thought it desirable to increase the culture of wheat, because it makes most manure. If grown every third year with clover and sheep it improves the land. He did not approve of turning in clover. Would rather let his neighbors eat it off with their sheep for nothing. He turns under a clover sod in July, from seven to eight inches deep, with a Michigan subsoil plow. Sows one and a half bushels of seed per acre. The Mediterranean variety is more extensively grown in his vicinity than all other kinds together. The Dayton variety has yielded very well, but is tender, and is apt to sprout in wet harvest weather—is no better than the Mediterranean—a little whiter. Some farms that grew it last year have not sown it this fall. The earliest variety that he has grown is the Virginia May, a bald white wheat, but not as white as the Soules. He drills his wheat. The Hessian fly does not affect the Mediterranean as much as it did the Soules, so that they can sow earlier than formerly; say the first week of September. Has not seen the Hessian fly for five years. The midge is the only enemy they have to fight now. Sown in good season, the Mediterranean is but little injured; but when sown as late as October, is as much injured as the Soules.

JOHN WADE of Coburg, C. W., thought seed wheat should be brought from the North, as it ripens earlier. Corn from Canada will ripen two weeks earlier. There is no crop more profitable than wheat. Has grown wheat every third year, and his land is better than it was thirty years ago. His rotation is grass land, manured and planted with corn, followed with oats or barley, seeded, followed by wheat. In his vicinity, they seldom grow Winter wheat. The Fife is the most popular spring variety. Gets about thirty bushels per acre.

Gen. **HARMON** had sowed three bushels of unleached ashes and four bushels of plaster per acre on his wheat, and obtained an increase of four bushels of wheat per acre.

S. WALRATH of Canton, St. Lawrence county, said they used to grow wheat in his neighborhood. He had sown wheat for ten years, but the fly took it, and he had abandoned wheat culture. Corn and grass and Spring wheat are now grown, and the land is increasing in fertility. Farmers grow more roots than formerly. Carrots are preferred.

G. MILLER of Markham, C. W., occupies between three and four hundred acres. He grows about twenty acres of roots every year—principally ruta bagas. After the roots are off, plows the land in the Fall, and cultivates it in the Spring, and sows Spring wheat and seeds down with timothy and clover. Obtains a larger yield of Spring than Winter wheat. Sows two bushels of Spring wheat per acre. Manures his land for roots. Never applies it to his grass land—likes to plow manure under. Has obtained 393 bushels of wheat from seven bushels of seed—about a bushel per acre, say 56 bushels per acre.

A. B. DICKINSON of Steuben Co., N. Y., said a distinguished agricultural writer had stated that the wheat crop in the State of New-York had fallen off from 35 to 13 bushels per acre, and this statement had been quoted by Prof. Liebig, and passed current in European agricultural literature. Now he wanted to say to persons who might be present from other States, that the State of New-York had never seen such crops as had been grown this season since the year 1816. The census is not reliable. Our soil is not exhausted. He wanted Liebig to know that the statement he quotes is not true. When you have good wheat you seldom have good corn. This year it approached nearer to it than he ever knew before. On limestone land winter wheat was more profitable than spring wheat. The largest crop of spring wheat he had seen was 40 bushels per acre. He had seen a crop of winter wheat that yielded 54 bushels per acre. We have a good crop whenever the midge does not destroy it.

Sheep Husbandry.

The hour devoted to the regular subject having expired, the subject of the previous evening was taken up.

SOLON ROBINSON of New-York, said Mr. Thomas Bell of N. J., usual kept 100 sheep. He buys common sheep of rather large size in the fall, and crosses them with a full-blooded South-Down. The lambs are dropped about the 1st of April. The ewes in the fall cost from $2.25 to $3.50 per head. He selects the best, and pays the highest price. He has good August pasture, and keeps the sheep well, so that they go into winter quarters in good condition. In the winter, keeps them in yards with open sheds, 50 in a yard, with feeding racks, and liberty to go under the sheds or lie in the open air as they see fit. Feeds them almost entirely on cornstalks, cut up at the ground as soon as the corn is hard enough to ripen in the stook. He does not chaff the cornstalks. The sheep eat off the leaves, and the butts serve for bedding. A few weeks previous to lambing, the ewes that are heavy are drawn out by themselves, and fed with good hay and a little grain. He seldom loses a lamb. By the end of July, he has his lambs, which are strongly marked by the South-Down characteristics, all sent off to the butcher. This year he obtained $4.75 per head for them. After the lambs are weaned the ewes get fat, and are sold to the butcher in time to take on a new supply. They have just been sold this year, and he netted, from lambs, wool and old sheep, a profit of $7.50 per head, over the first cost of the sheep. The year before he made a profit of $7 per head. Besides this, he finds that the sheep are enriching his land.

Mr. **PETTIBONE** of Vermont, had no doubt about the profits of a breed of sheep as related. His sales of wool last June from his Spanish Merino flock amounted to over $2 per head; and his flock for fifteen years had averaged 4¾ lbs. of wool, such as this year sold at 50 cents per pound. He had picked out 20 wethers that sheared 8 lbs. per head, and two were sold for mutton at $3.50 each. He usually selects out eight or ten wethers in the fall, and gives them grain through the winter, and then kills them through the summer for his own use. They dress from 10 to 15 lbs. per quarter, and not unfrequently have 10 or 12 lbs. of tallow in them. When you cannot keep over 50 sheep he would keep the mutton sheep.

A. B. DICKINSON has sheared 11,000 sheep in a season, but would leave every man to decide for himself which was the most profitable sheep for him to keep. If mutton is the principal object he would keep the big sheep, the larger the better, because the larger the carcass the more the mutton sells for per pound in market, though he would not pay as much for it himself for his own eating. For wool the fine wools are the most profitable. He does not like *gummy* sheep, wants a thick fleece but no gum, selects ewes whose fleeces have little gum, breeds from these, and the manufacturers will soon find it out and pay a higher price for it. He washes his sheep in vats. Don't let them run in the dust afterwards, as some people do in the west on purpose to increase the weight of the fleece. Has tried the experiment and knows that *mature* animals consume food in proportion to their live weight.

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Sale of Horses, Cattle, &c., by the Albany Association.

The weather was more propitious Oct. 10, when, according to previous adjournment, the Albany Breeding Association proceeded with their Catalogue Sale of Improved Stock. The results will be found below, the name and location of the purchasers showing how widely the animals offered have been disseminated. The prices, although below those heretofore obtained on many occasions for stock of similar value, must be regarded as gratifying in a season of quiescence like the present, and at a period of the year when the public generally are rather disposed to act the part of sellers than that of buyers. The *year*, where given in the following table, is that in which the horses referred to were respectively foaled:—

HORSES—BROOD MARES.

1.	Caroline, 1852, C. W. Bathgate, Fordham,	$105
3.	Princess, 1854, C. W. Bathgate,	225
6.	Dolly Phelps, 1847, Thos. Austin, Albany,	210
8.	Sontag, 1852, F. L. Yates, Albany,	185
9.	Ruby, 1850, John Phalen, Albany,	130
10.	Lady Jane Gray, 1846, F. Herman, Albany,	95
12.	Pauline, 1850, T. Creighan, Albany,	220
13.	Empress, 1850, Charles Miller, Kinderhook,	225
16.	Blanche, 1850, Geo. E. Porter, Salem, Wash. Co.,	75
17.	Lady Austin, 1850, Capt. J. Hilton, New-Scotland,	130
19.	Black Hawk Maid, 1850, J. Nelson Harris, California,	200

THREE YEARS OLD.

22.	Juliet, by Black Boy, R. Harper, Albany,	120
23.	Flora, by Gray Prince, H. Bleecker, Jr., Albany,	200

TWO YEARS OLD.

25.	Sorrel Gelding, by Black Lock, F. L. Yates, Albany,	100
26.	Black Maria, by Henry Clay, C. W. Bathgate,	260
27.	Parkie, by Henry Clay, F. L. Yates,	150
28.	Sorrel Filly, by Black Boy, B. Allen, Westchester,	95
30.	Brown Filly, R. Harper, Albany,	95
32.	Chestnut Filly, by Young Albion, C. Miller, Kinderhook,	85
33½.	Brandon Maid, by Black Hawk, C. W. Bathgate,	190

YEARLING COLTS.

34.	Horse Colt, by Gray Messenger, Thomas Creighan, Albany,	150
36.	Horse Colt, by Henry Clay, E. Murphy, Troy,	50
37.	do. do. do. do.	70
39.	Bay Filly, by Young Henry Clay, George H. Charles, Albany,	60
40.	Brown Filly, by Henry Clay, H. R. Rathbone, Albany,	150
42.	Bay Filly, by Monk, H. R. Rathbone,	90
43.	Horse Colt, by Lone Star, T. Creighan,	140

COLTS OF 1860.

47.	Black Filly, by Spirit of the Times, C. W. Bathgate,	150
51.	Bay Filly, by Black Warrior, C. W. Bathgate,	65
52.	Brown Horse Colt, by Spirit of the Times, C. Bell, Albany,	70
54.	Black Horse Colt, by Black Murat, Thos. Creighan,	105

STALLIONS.

60.	Ephraim Smooth, 1838, by Gray Prince, Geo. H. Charles,	500
63.	Logan, 1837, by Henry Clay, E. K. Bradbury, East Greenbush,	500
	Total Sales of Horses above,	$5,195

CATTLE—SHORT-HORN COWS.

3.	Red Rose, H. Bleecker, Jr., Albany,	$90
4.	Tawasentha, F. L. Yates, Albany,	100
9.	Rosa Bonheur, Ira Harris, Albany,	75
10.	Tahmoloo, C. L. Hayes, Unadilla,	85
11.	Angelina, C. L. Hayes,	50
12.	Agnes, R. Harper, Albany,	130
14.	Ellen, H. Bleecker, Jr.,	97½
16.	Nymph, R. H. Bingham, Albany,	90
17.	Filbert, John Arcles, Albany,	190
22.	Albino, C. L. Hayes,	95
24.	Snow Drop, T. Roessle, Albany,	77½
27.	Florence, J. Nelson Harris, San Francisco, California,	385
28.	Finella, J. Nelson Harris,	520
46.	Isabel, W. E. Haswell, Bethlehem,	80
47.	Jenny Lind, H. Schoonmaker, Bethlehem,	275
48.	Perfection, W. Haswell, Bethlehem,	325
51.	Minna, C. L. Hayes, Unadilla,	445

SHORT-HORN BULLS.

1.	Neptune, Wm. Hurst, Albany,	200
14.	Lincoln, D. V. S. Rainsford, New Scotland,	70
15.	Navigator, George Charles, Albany,	100
16.	Pro Bono, S. Stratton, New-York,	70
17.	Comet, H. Sherman, Sandlake,	70
18.	Albanian, M. Kane, Watervliet,	45
20.	Masterman, J. S. Clemons,	70
23.	Bon Ton, Isaac Clements, Mechanicsville,	85
22.	Champion, R. P. White, Jefferson county,	50

NORTH DEVON BULLS.

5.	Empire, F. L. Yates, Albany,	125
7.	New-York, J. Tulsco Wiswall, Mobile, Alabama,	90
8.	Empire, George Porter, Salem,	80
	Total, 29 head of cattle, aggregating	$4,165

PRIVATE SALES.

The Association sold at private sale, two lots of South-Down sheep, got by Thorne's Buck, No. 57, to J. Tulsco Wiswall, Mobile, Ala.

One lot of South-Down sheep, to Isaac S. Clements, near Mechanicsville, Saratoga county, N. Y.

Six lots of South-Down 1Sheep to Abram Fitch, New-Scotland, Albany county, N. Y.

One Short-Horn bull calf, by Neptune, 8192, to Henry Roseboom, Cherry Valley, N. Y.

One Short-Horn bull calf, by Neptune, 8192, to Thomas Bell, Roseboom, Otsego county, N. Y.

One Short-Horn bull calf, by Prince of Wales, 2062, to Mr. Pierce of Worcester, Mass.

Brood Mare Lady Russell, to Garret Ives, Watertown, Jefferson county, N. Y.

One stud colt by Bulrush Morgan, also to Mr. Ives.

Two pens of Berkshire hogs to J. Arcles, Albany, N. Y.

One pen of Suffolk hogs to Isaac S. Clements, near Mechanicsville, Saratoga county, N. Y.

One pen of Suffolk hogs to Rev. Dr. Morgan, New Rochelle, N. Y.

Capt. Joseph Hilton sold at private sale, two lots of very superior North Devon heifers, got by Empire, to J. Tulsco Wiswall of Mobile, Alabama.

The entire sale at auction, of horses and cattle, by the Association, amounted to $9,360; and at private sale and sale by auction on the 10th of September, $3,160, making a total of $12,520, besides leaving several fine horses and cattle still unsold.

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BUCKS CO. (PA.) EXHIBITION.—The exhibition of the Bucks County Agricultural Society at Newtown was in every way successful and gratifying to the many friends of that institution. The attendance of visitors was very large —fully up to, if not exceeding that of any previous exhibition. The scene presented on the exhibition ground on Wednesday was animating in the extreme. The large exhibition building was gaily decked outside with flags and streamers, and inside there was every species of attraction. The fair sex were on the grounds by hundreds, adding interest and beauty to the whole affair. The track was in first-rate order for the display of horses. The display of articles in the various departments was very creditable to the productive abilities of Bucks county. The vegetables of different kinds would bear comparison with those shown at agricultural fairs in any county. They were all the production of Bucks county farmers, and not of professional gardeners. In the department of fruit the display was not very large in quantity, but in quality it appeared to be very superior. The display of machinery was very good—particularly of agricultural implements. The clatter of machinery was incessant. Most, if not all of the implement makers and machinists of the county were on hand, with almost every conceivable variety of straw cutters, mowing and reaping machines, plows, harrows and horse-rakes. The number of neat cattle on exhibition was rather limited on the first day, but on the second day a good number of dairy cows and young cattle were added to those already on hand, and the display was passably fine. The number of horses exhibited fell considerably short of last year, but a finer display of colts was never witnessed in this country. There was but a moderate display of poultry, pigs and sheep. There was more grain of different kinds on exhibition than we ever witnessed there before. It was all exceedingly fine. The exhibition of horses on the track attracted much attention. The articles on exhibition inside the building—mainly confined to the ladies' department—were all of the first quality. The preserves, bread, butter, cakes, boiled hams and various other edibles were hard to beat—good enough for the palate of the most fastidious epicure. There were forty specimens of fresh butter. The receipts from the sale of tickets and the entrance of carriages at the gate on the first day amounted to $634—the second day, to $997—making in all $1,631. Add to this about $400 from the rent or sale of refreshment stands, &c., and the whole income from the exhibition will exceed $2,000. On Friday there was a public sale on the ground, giving exhibitors an opportunity of selling such as they saw proper, which they had on exhibition. It was not very largely attended. —*Bucks Co. Intelligencer.*

Inquiries and Answers.

Farm Mills.—Do you or any of your correspondents know of any cheap grinding mills, portable in their construction, that are recommended for a country custom business, equal, or about so, to the old four foot Burr-stones? I have seen one advertised in Mt. Vernon, Ohio, well recommended for power and capacity. Do you know any thing of either of these? T. F. C. *Springfield, Maine.* [A number of farm mills have been offered in market, but our practical knowledge is not sufficient to enable us to speak of them with confidence. Doubtless some of our readers have tried them, and can give valuable and reliable information in relation to their performance and general value—will they favor us with statements of their experience?]

Sweet Apples for Stock, Squashes, &c.—1. In setting sweet apple trees with view to feed the fruit, what kinds of apples are best? 2. Has anybody ever raised squashes to fatten hogs? If so, what kind, and with what result? M. S. H. *Chickopee, Mass.* [1. There are several varieties of sweet apples, which may answer well for feeding stock—some better than others, according to their adaptation to different localities. The High-top Sweeting is a valuable early sort, especially at the West—the Golden Sweet is fine, but less productive. Among autumn varieties, Haskell and Corlies Sweet are very productive sorts, the latter the most so, and the best grower—and the Pumpkin Sweet is valuable for late fall and early winter. The Jersey Sweet is an excellent and productive autumn variety, but the tree is a moderate grower and rather tender. There are many local sweet apples, some of which no doubt are very prolific; and if more attention could be given to select with a view to stock-feeding, we have no doubt that some might be found, that would yield more per acre than root crops, and at far less cost. Both cattle and swine thrive on high flavored apples, if not sweet. 2. We cannot give the desired information in relation to squashes.]

Alsike Clover.—I have seen an account of Alsike or Swedish clover in last Country Gentleman, and having tried to procure seed from Scotland but failed, I would thank you, if it lies in your power, to send me a few seeds for experimental purposes and oblige. Inclosed you have stamps to pay postage. John M. McAlister. *Pokagon, Cass Co., Mich.* [The heads of the Alsike clover sent us by Mr. Bartlett, were cut before the seed matured. We have, however, sent some of them to our correspondent. Possibly they may yield a few seeds which will germinate. We presume J. M. Thorburn & Co., seedsmen, New-York, would order the seed of this plant from abroad at the request of any one desiring it.]

Vinegar—Subsoil Plow—Compost.—Will you please inform the writer the best means of converting cider, made of apples from a promiscuous orchard, into vinegar—also where the best two-horse subsoil plow can be procured—also the best manures for a new garden, located on a thick orchard grass sod, when best to be plowed and the depth? A Young Farmer and Subscriber. *Hamlet Hall, Amherst Co., Va.* [The usual mode of making vinegar from cider is to expose it in a barrel to the warmth of the sun on the south side of a building for several months, admitting the air by leaving the bung open. The addition of a little sharp vinegar hastens the process. Some throw in portions of brown paper, which is also thought to be useful.

An excellent subsoil plow is figured and described in the Illustrated Annual Register for 1860, manufactured by Holmes & Stringer of Munnsville, N. Y., and also by Nourse, Mason & Co. of Boston. This plow works best where there are not many stones. Where the soil is quite stony, the ditching plow made by Paschall Morris of Philadelphia, is best.

The best manure for gardens is a compost made of stable manure; or the stable manure itself will answer an excellent purpose, if applied a year before the land is planted, and well worked in. The compost may be applied for immediate use, and may be made by mixing turf, peat, loam or clay, with yard manure, with a little leached or fresh ashes. If there is but little vegetable matter in the soil, peat, muck, or leaf mould may be freely used in the compost; if the soil is mostly sand, a large admixture of clay would be useful, if at hand. The depth of the plowing should depend on the nature of the subsoil, and the amount of manure that may be worked down into it. It should be plowed often enough at different times to pulverize it well and intermix the manure.]

Leached Ashes.—Are ashes leached at the soap boilers, valuable to compost with swamp mud—is not much of the potash exhausted? How does its value for that purpose compare with the unleached? Is there enough phosphate and carbonate left to pay to compost? Dana, in his "Essay on Manures," page 52, states it to be very valuable; I think it must be a misprint. Ohio. [Although much of the potash is usually taken from the ashes, yet enough remains to render them very valuable. The proportion left varies at different manufactories. The lime added is valuable. We are not able to give the proportion of potash remaining, but think it often a third or a fourth, and at some imperfect establishments, even more. A tenth or a twentieth forms an excellent addition to compost.]

Cherry Trees.—Please imform me as to the best way to preserve young cherry trees that have been scratched or skinned, and make them heal up the soonest. H. J. L. [Cover the wounded parts with a thin coat of grafting wax, or with the composition made by dissolving shellac in alcohol. Give the trees good culture so as to make them grow rapidly, and they will soon heal over if not fatally injured or too much barked.]

Spanish Chestnut—Will the Spanish Chestnut stand cold as low as 26° below zero, and bear fruit, and also the English filbert. P. O. *Racine, Wis.* [It is probably too tender—it endures the cold in New-York, but the seasons are too short for the maturity of the nuts—and it would not probably succeed in Wisconsin, both on account of the tenderness of the tree, and the shortness of the summers.]

Planting Peach Stones.—I have just received from Macon, Ga., a fine lot of peaches. I wish to inquire of you, "how to prepare the pits, and how to plant them, so as to succeed best with them." Julius Nichols, M. D. *Suffolk, L. I.* [If mixed with sand this fall, and exposed to freezing and thawing, a part will grow next spring, and all, if cracked, and the kernel planted two inches deep while fresh. If not cracked, many will not grow till the second year.]

Compost for Trees.—At what time, or how *early* in the fall, is it best to apply compost manure to fruit trees? R. [It may be applied any time during autumn, or even early in winter—the precise period is not important. If applied to the surface, and spaded or plowed in in spring, it will have a good effect.]

Spring Wheat.—Can you, or any of your readers, inform me which is the best variety of spring wheat to raise in eastern Connecticut? Joseph Arnold.

Corn Cutters and Corn Mills.—Which is the best farm mill that you know of for corn, in the ear or shelled? Also, which is the best machine for cutting up cornstalks, and bruising or grinding the same? Do you think they can be used with profit to the farmer, over the usual mode of feeding corn and corn fodder? Wm. Todd. *Clark Co., Mo.* [We have not had sufficient experience with the different corn mills and corn cutters to say which is the best. We hope our readers who have had full experience will give us the results. We have tried Joice's Star Mill for grinding corn in the ear, and Hickok's Stalk Cutter and Crusher, and found both to answer a good purpose. The former worked with two horses and the latter with one. Where there is a large herd of cattle, we have no doubt a great saving would be effected.]

Ditching Plow.—I wish to inquire where I can buy the Adjustable Ditching Plow, represented in Register of 1860, page 296, fig. 147. If you can give me the desired information you will oblige, Joel Brown. *Mount Healthy, O.* [It may be procured of Milton Alden, of Auburn, or McFarland Brothers, of Union Springs, N. Y.. Price, about $10.]

Japan Lily—Verbena—Phlox.—I have a Japanese lily, planted last spring, which grew very well until a month since, when it grew black at the top and I cut it off. It is still alive, but does not grow or show any signs of flowering. Shall I take it up in the fall, and put it out again next spring? Can Verbenas and Heliotropes be kept through the winter in a cellar? Can the Phlox Drummondii be propagated by seed? Can Petunias? Please answer these inquiries in your paper. R. E. S. *St. Louis, Sept.*, 1860. [The stem of the lily has probably been destroyed by an insect—take up the root, set it out in a new place, cover it with a thin turf for winter, and it will probably do well. Heliotropes, with much care, may be wintered in cellars; but it is extremely difficult if not impossible to keep verbenas in this way. The Phlox Drummondii is very easily and most commonly propagated by seeds, and runs into numerous and beautiful varieties. Petunias also are readily grown from seeds.]

Osier Willow.—Can you inform me where I can get cuttings of the Osier Willow, and the price per thousand? I want from eight to twelve thousand cuttings if I can get them *right*. When is the best season to procure and plant them, and where can I get instructions for their growth and management? L. H. W. *Rockingham, N. C.* [The cuttings can be procured of Mr. J. H. Corning, Valatie, Col. Co., N. Y., who will give all needed information in relation to their management.]

Budding the Peach.—Having some 6,000 young peach trees to bud, I would be glad to see in the Counnry Gentleman plain directions how to bud and the management afterwards. G. S. [As budding must be done when the bark of the stock peels freely, it will be too late for the successful performance of the operation when this reaches our correspondent. He will find minute directions, illustrated with cuts, in the first number of the Annual Register of Rural Affairs.

The Arbor Vitæ.—Can the arbor vitæ be grown in the open air from cuttings—if so, the season, &c.? Q. [We do not know of any successful experiments in propagating the arbor vitæ by cuttings in open air—it is commonly raised by seed.]

The Pie Melon.—I have raised three hills of apple pie melons this year. Can you, or some of your subscribers, inform me how to make pies of them, and also how to make preserves. C. S. *Gravesend, N. Y.*

Have you got Skellett's Practical Treatise on the Parturition of the Cow? If you have, what is the price? M. S. K. [We have not seen this work.]

Patagonia Squash, &c.—Will some of your readers please tell me through the Country Gentleman, if they know anything about the Patagonia winter squash. Also what its cooking and eating qualities are. Whether Kohl Rabi will keep into the winter, and whether it is good for table use in the winter. And please ask G. B. H. to give us an article on the construction of cold pits. A Subscriber.

Poultry.—Will any of the readers of your valuable journal give their experience in keeping poultry, viz., which kind are the best layers in winter—which kind is earliest ready for table in spring? Also the length of time after being hatched before ready for table? A Subscriber.

Troublesome Grass.—I enclose a specimen of a coarse grass which is overrunning my lawn, and of which I am unable to get rid. Will you kindly suggest a remedy? The sod has not been disturbed for many years, and it is thickly planted with shrubbery and trees. I am therefore naturally desirous to avoid plowing. L. *Philadelphia.* [The grass is the *Paspalum læve*, and is variously disseminated throughout the country. We do not know of any especial means of eradication, or any mode different from the usual remedy for weeds, namely cultivation, eradication, or burying, in connection with avoiding the spread of seed.]

Comparative Value of Wool.—I wish to make an inquiry as to the comparative value in market of South-Down and Leicester, or Cotswold wool—what is the difference per pound, and what may be considered as the average difference in the weight of fleeces? Are the long-wooled sheep as hardy as the South-Downs, and do they sell any higher per pound as mutton? H. E. [Will some of our readers, who can give us facts in relation to this matter, please answer the above.]

Inquiries about Tile.—Do the Albany Tile Works manufacture "*collars*" for their "*pipe tile?*" [yes, for the 1¼ and 2¼ round,] and at what price? [$4 per 1,000 for the 1¼ inch collars, and $10 per 1,000 for the 2¼ inch collars.] Branch pipes to connect "minor" with the "main drains," and cost? [They do not.] What is the probable cost of freight on tile from Albany to Richmond, Va? [about $3 per ton at this season.]

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[For the Country Gentleman and Cultivator.]

RESULTS OF EXPERIMENTS.

Eds. Co. Gent.—Let me give your readers the result of a few experiments and observations.

Experiments with Guano.

I bought of a gentleman of high rank in the U. S. Navy, who had purchased for his own use in Valparaiso, a quantity of guano. This I sowed upon a small piece of rye, sown upon land that had been denuded of its soil from three to ten feet, by the Central Railroad Company, some years ago. The effect was wonderful. I had a good crop of rye where I could have reasonably expected very little, and a magnificent crop of clover and grass following it. The land was manured last fall slightly, and with only chip manure in some portions.

This was *guano*. Now per contra. I sowed upon a small piece of excellent land, not the third of an acre, a sack of guano bought of Messrs. ——, New-York. This was after peas and turnips were sown upon it, about the 10th of August. I had previously manured very highly with well rotted pig manure, about the same quantity of land adjoining, also after peas, and had sown turnips about the 1st of August.

We watched the guanoed field with much interest. It came up finely, and seemed to gain upon the pig manured patch. Four weeks after sowing it seemed almost equal to it; but now, alas for Messrs. ——'s guano, there is no longer any room for comparison. In short the guanoed turnips are a failure; but few respectable ones in size among them, while the other crop cannot be surpassed in Oneida.

Moral.—Buy no guano of anybody. The agents are the only reliable dealers, and they sell it only in very large quantities.

Muck.

Got out a good many loads last January, and spread very thick upon a gravelly and loamy piece of land. In April sowed oats and seeded with mixed grass and clover seed. Other portions were manured, and others still were not touched. Where there was the "smell of manure" the clover showed it very plainly, but we saw no effect from the muck at all.

Corn in Drills for Fodder, vs. Corn Broadcast.

Broke up Mohawk flats in June, and was engaged in sowing corn, state and western, in drills in the alternate furrow, when an old farmer friend, of 50 years experience, from Jefferson, stopping at my house, begged of me to try a little broadcast. I tried an acre, partly western and partly state, but I am obliged to state that my Jefferson county friend was badly beaten, although his crop was enormous. Let me advise your readers to consider it settled, that corn should be sown in drills. My western corn was particularly fine, ten feet high and upwards; acres of it just alike, and cut just in the flower when the butts were sweet as sugar. It is a glorious crop, unapproached in my opinion, by any root as a forage crop.

Hungarian Grass.

To please myself I sowed an acre of this article adjoining the corn, also upon greensward. Product, two loads of hay. This proves to my mind that greensward is not the land for Hungarian grass. Some other experiments in the culture of this grass, I will, with your permission, detail on some future occasion. W. *Utica, Oct.* 17, '60.

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REMEDY FOR CORNS ON HORSES' FEET.

Messrs. Eds.—Having gained a great deal of knowledge from your valuable paper, the Co. Gent., I will contribute my mite for others.

The cure of corns is very easily accomplished by the following plan: Don't cut out the corn, nor put spirits of salts on it, neither pare the heel down, so that the shoe will not touch it. It is of no use whatever, because in a few days the shoe will be hammered down on the corn, making it worse. All this weakens the heel. Take some tow dipped in tar, place on the corn, and nail the shoe on over the tow, which lessens the jar on the corn. Put the shoe on with five nails, three on the outside, and two on the inner side. Perhaps some will say, oh! five nails won't hold the shoes on my horse's feet three days. All I have to say is, try it. In three weeks take the shoes off, and examine; if the corns are not gone, put on some more tow and tar, and in a few shoeings they will disappear without our injuring the foot by weakening the heel, as the other plan, paring and spirits of salts, assuredly does. Weak heels, not having the shoe put on level, and with eight nails, thereby destroying the expansion of the foot, which keeps the foot healthy, and not keeping the foot soft, are the causes of corns. When you take off the shoe, notice how soft the place is where the tar was. Is that not a reason for keeping the foot soft?

One who has Tried it.

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A lady describing an ill-natured man, says: "he never smiles but he feels ashamed of it."

CARE OF SHEEP IN AUTUMN.

In some remarks on the "Care of Sheep in Spring," (Co. Gent., April 5, 1860,) we adverted to the importance of having sheep *in good condition in the fall*—because, if poor, it is particularly difficult to bring them safely through the winter. "Without very careful management," we said, "such sheep, especially if kept in large flocks, are decimated by disease and starvation—the poorer and weaker they get, the less chance they have to secure food in the crowd of stronger animals." If carried successfully through, it is always at a larger cost for feed and care than would have been requisite had they been in good condition in autumn. So that a little *present* attention to secure their thrift, will pay as well as any that can be given in the future.

The lambs should be taken from the ewes the last of September, in order to give the latter time to recruit in flesh before winter. Unless in very good pasture while suckling their young, sheep get low in flesh from this large demand upon them, and in any case cannot become very fat while the yield of milk continues. In many cases coming under our observation, this demand is allowed to continue too long; lambs are even allowed to run with their dams at all times—not becoming weaned until winter. It is much better for both ewes and lambs to separate them, as directed in our remarks on the "Care of Sheep in Summer," (Co. Gent., July 26, 1860,) at from sixteen to eighteen weeks old, giving the lambs the run of some newly seeded clover field if convenient, and, after confining the ewes to short pasture for a week or ten days—the better to dry off their milk—to give them also the best feed to be had, that they may repair the waste of flesh while the grass is yet good in autumn. We have had better success since we adopted this management than before—both sheep and lambs give more wool, and are easier to winter.

If the advice of the article last named, in regard to selling sheep has been considered, we have now our main flock composed of young and healthy sheep. If, however, on account of their lambs, any old ewes have been retained which are inferior in form and in wool, we should again sort out and separate, and give them feed to put them in as good order as possible. If we conclude to keep them over winter, this is the best policy; if we think best to sell, (while the demand for sheep is brisk and prices up, as at present,) it will enhance their market value. But it is safe to adopt the rule, never to suffer a sheep to get over five years old on your hands, unless of particularly valuable character as pets or breeders.

After the middle of November, the grass is so frost-bitten, that even if abundant, it will hardly keep the flock in good order without some additional nutriment. And before this time, it is well to be on the watch to see that the flock has all the food necessary to their keeping in good condition. We are not in favor of the confinement of sheep in pleasant weather, but would allow them the run of the pastures for some time after we began to feed them occasionally. In stormy weather they should have a shelter, for the long cold rains of this season are very injurious, and if exposed to them, sheep often get diseases of the lungs, from which they suffer much, and perhaps never recover.

To the "Care of Sheep in Autumn," may well be added some hints on getting prepared for their care in winter. Good sheds and yards should be provided—sheds sufficiently large to accommodate the flocks assigned to them, with their feeding racks in stormy weather. We would not have over fifty sheep in a single enclosure, and a less number would be preferable in the way they are usually cared for. Prepare these fixtures *before* they are needed, that when winter comes suddenly upon us, it may not bury our flocks in the snow for want of proper shelter. Conveniences for watering should be provided—sheep really require this in winter, and will not thrive without it. But we will leave further hints until December, thinking the matter of sufficient importance to require at least *quarterly* notice.

Improvement of Worn-out Sandy Land.

Messrs. Tucker & Son—Having a few moments to spare, I propose to improve them by giving your readers my method of cultivating worn-out sandy land.

It is now twelve years since I commenced farming for myself, without capital enough to buy a cow. Of course I had to run in debt for my farm, and pay for it in yearly payments by cultivating the same. I have necessarily had to make improvements slowly. At the time of my purchase, there was a field of about fifteen acres (separated from my house lot by a public highway,) of worn-out sandy land, which is here termed pine plains. My feeling, after I had occupied the land one year, was, if this lot was out of sight of my house, I would not do a thing to improve it. As it was, it was an unsightly thing, which I could not bear, and something must be done. To test its capacity as it then was, I planted one acre of corn with ashes and plaster in the hill. It was well hoed, and at harvest I had less than three bushels of very small ears of corn. I read in The Cultivator that clay was lacking in soils of this description. During the next two winters I drew on a light coat of clay. One acre received 50 loads, such as one pair of oxen could draw up quite a hard hill. I am sorry I cannot tell how much was put on the rest of the field; it was a much less quantity; perhaps twelve or fourteen loads to the acre. Since the application of clay I have applied a small quantitity of manure, and the whole field has increased in fertility until some of it is very productive.

For example, I will state what the acre has done this year, to which 50 loads of clay was applied. Last year it bore a crop of oats and was stocked to clover; this year was mowed the last week in June—produced two large loads of hay, (all clover.) It was immediately turned over with one pair of oxen; a light dressing of manure was then applied, and two and one-half bushels of northern corn sown on it, and the land was well harrowed and rolled. I fed from this piece of ground for two weeks, 18 cows, all of which are giving milk, and one pair of oxen and one pair of horses, once a day. I also kept my stock hogs upon the same.

My cows were turned out an hour or two each day for exercise, and once beside to water—the rest of the time they were kept in the stable, and on sparred floors. There was feed enough grew on the acre this season, to keep a cow a year.

About three acres of the field was set with apple trees four years ago, which are growing very fast. Some of them hung full of apples this year.

The whole field has been in cultivation this year as follows: Clover, cornfodder, oats, rye, corn, carrots and cabbage, and one-fourth of an acre is used as a family garden. There was more land in rye than any other one crop. All of the above crops have been very satisfactory to me, especially so when I think a few years ago the whole field would produce nothing worth harvesting. M. S. K.

P. S. During the past few months I have seen in the Co. Gent., some very strong arguments against sparred floors for stables—some of them, perhaps all, from first class farmers. Do they reason from practical knowledge or theory? M. S. K. *Chicopee, Mass.*

THE CULTIVATOR.

ALBANY, N. Y., NOVEMBER, 1860.

HURRIED JOTTINGS.—On my way in some haste to the scene of our State Fair at Elmira, I can only jot down one or two brief allusions to the transactions of the past few days. The Skaneateles Farmers' Club held their Sixth Exhibition Tuesday and Wednesday. The first day was very rainy and unpleasant; the second scarcely better, for although clearer, the wind was high and cold. The town, however, was wide awake, the grounds quite well attended, and the Show a creditable one. A string of thirty-five or forty yoke of working oxen attracted justly much attention; a lately patented implement for laying tile on the mole-plow principle, without digging any ditch, was put to work; a very neat building for fruits, flowers, home manufactures, &c., was handsomely filled, and, with some neighborly contributions from adjoining towns, the whole spoke well for the enterprise of the people of Skaneateles and its vicinity. I was glad to make the personal acquaintance of so many of the officers and members of the Society. In spending, during the course of the day, several hours with S. M. BROWN, Esq., of Elbridge, I picked up moreover a number of notes of Agricultural interest, which when better opportunity occurs, I shall hope to share with the readers of the Co. GENT. There are many evidences of good farming in all the region through which our drive carried us, and Mr. B. has had long experience himself, as well as been a close observer of the practice of others.

A disconnected and tedious journey thence brought me into Canton, at a late hour Thursday night, where the St. Lawrence County Society was holding its Annual festival. It had been a fine day and the attendance of people was such I learned, as to place about $1400 in the Treasurer's hands; but during the night the rain came on, and Friday was a cold, blustering, damp, discouraging day. Many of the cattle had been taken off from the grounds, but the cause for surprise was rather that so many should have remained, and that the few fitful glimpses of sunlight that now and then struggled through the clouds should have attracted so many people. Towards noon the attendance became quite large; the extensive refreshment tables manifested a gratifying activity; the tasteful Floral tent was thronged; the other Halls were well filled, and many were scattered about among the horses and the cattle.

There were several individual contributors to this exhibition which I should like to mention at length if time permitted. The President, Hon. C. T. HULBURD was constantly at hand, and, like Secretary WINSLOW, and the other officers, indefatigable in effort; while the presence of numerous visitors from Essex and Jefferson showed the high rank which the exhibition of St. Lawrence holds among its sister counties. If I pass by the stock so hurriedly, we shall have to pause for a moment before a very simple and comparatively inexpensive contrivance for *pulling stumps*, of which there are still many to come out over all this region—invented as I understood by a subscriber to the COUNTRY GENTLEMAN, in response to a call published in that journal some time back, for a cheaper and more effective machine. I shall probably have occasion to refer to this subject hereafter more particularly.

A squall of the first snow I have seen this season came whistling about our ears in the midst of the address, but no one seemed to mind it much, and I must close this hasty note by adding that if the Farmers of Northern New-York turn out so well in the support of their Societies in weather so unpromising, I should like to have the opportunity some time of seeing what they can do when the sun really shines, and the land is less like a morass, and the atmosphere is not quite so energetic in its demonstrations.

L. H. T.

☞ A letter from Thornedale, under date of the 24th ult., informs us of the sale by Mr. THORNE of one of his young bulls for exportation to British soil. The purchaser is F. W. Welsh, Esq., of Limerick, Ireland, who is said to be himself a breeder of Short-Horns, and who has been for some time travelling in this country. He selected one of Lalla Rookh's calves, by Grand Duke, now six months old—a selection which we may add, from personal knowledge, does credit to his judgment—for the sum of $1,000; and thus affords us the first instance in the Short-Horns or other improved breeds, of an American bred animal carried back to Great Britain. It is a fact worthy of particular attention, for the journey is a long and expensive one for an animal to be taken, unless the purchaser were really convinced of its decided superiority.

MR. FAY'S SALE OF ALDERNEYS AND OXFORD DOWNS.—The following extract is from a letter by a gentleman who was present to one of the editors of the COUNTRY GENTLEMAN: There was quite a large sale of pure bred and grade Jersey Cows, and Oxford Down sheep at "Linmere," the fine estate of Richard S. Fay, Esq., near Lynn, Mass., on Friday last, (Oct. 5.) The day was cold and very rainy, and the attendance consequently lessened, about a hundred being present. At two o'clock, after a handsome and substantial lunch, the sale was commenced by Wm. F. Otis of Boston; the pure bred Jerseys brought from $80 to $125, and the half bloods from $45 to $100. Mr. David Nevins, Mr. John Joy and Wm. S. Lincoln of Worcester, were among the purchasers. The sheep sold at prices running from $7.50 each for a lot of lambs, to $51. Two or three small lots were sold to go south, but the most of the flock was taken by James S. Grennell, Esq., of Greenfield, Mass. The introduction of so large a number of these splendid sheep, the best breed for early lambs, ripe mutton and fleece, all combined, into Franklin County, will soon give it a reputation for its sheep unequalled in New-England.

SEEDLING GRAPE.—G. P. SERVISS of Montgomery Co., N. Y., sends us a specimen of a grape, which he states was ripe the 25th of Aug., while the Isabella and Catawba, at the date of his letter, Sept. 10, appeared as green as at midsummer. He wishes to know the name. The specimens were fifteen days on the road, and when received the leaves were broken and the berries partly decayed. We cannot of course pronounce upon them, nor say whether they are a new variety. In character they appear to resemble the Isabella. We think them worthy of further attention.

SALES OF STOCK—We learn that Col. RICHARD PETERS of Atlanta, Geo., whom we had the pleasure of meeting at the advertised sale of stock of the Albany Co. Breeder's Association some weeks ago, has since purchased of Gen. JOHN S. GOE, the well-known breeder of improved stock, near Brownsville, Pa., six brood mares in foal by his famous horse "Bush Messenger"—one do., served by "Climax," (Black Hawk,) and one do. served by "Messenger." Col. P. also purchased of Gen. Goe, fifty Spanish Merino ewes. Besides this large sale to Col. P., we hear that Gen. Goe has recently sold an entire Messenger and Morgan Colt to ELIAS J. FAISON, Esq., of Faison's Depot, N. C.

INTERNATIONAL EXHIBITION OF 1862.—It is generally known that an Exhibition of the Industry of all Nations, is to be held in London in 1862, under the auspices of the Society of Arts, the same institution which got up the great exhibition of 1851. A list of subscribers to guarantee fund, amounting to about $1,800,000, is published in the Gardener's Chronicle. The list is headed by Prince Albert, who subscribes $50,000, followed by Mathew Uzielli, who subscribes a like sum. Then five subscriptions of $15,000—thirteen of $10,000—one hundred and three of $5,000 each, and a host of others ranging from $500 to $2,500 each.

☞ Mr. THORNE of Thornedale, has just received a splendid South Down shearling buck, winner of the first prize at the Chichester meeting of the Royal Ag. Society, from the celebrated flock of Wm. Rigden, Esq., thus adding another strain of blood to a flock already rich in first prize winners from the folds of Jonas Webb, Henry Lugar, Lord Walsingham, &c., &c.

☞ Seven weeks ago we wrote of the Harvest Rains in England—quoting from a London contemporary, the sad picture of merciless storms in constant succession beating to the ground a crop unmatured and already showing symptoms of mildew and decay. Since then, some glimpses of sunshine have now and then encouraged the English farmer to brighter hopes, but the month of October comes so late in the season that when he finds it opening, as it has, on many still unharvested fields, he can scarcely expect enough warm weather between Michaelmas and New Year's to fit them for the reaper and the miller.

Let us read once more the Mark Lane review of the week closing with October first, and then subjoin a few figures illustrative of the immense tax which such a series of rains becomes upon the resources of Great Britain:—"The opening of the past week," says the M. L. Express,

> Gave little promise for the yet outstanding corn. Monday night's tempest has been followed by heavy rains, more especially at the week's close, and without a set in of fine drying winds, there seems little hope that the remainder of the grain, if saved, will be in fair condition, sunny weather at this late period, on wet ground, brings with it such a volume of dew. Some quantity of wheat, even in the south and midland counties, remains to be carried, and the bulk of all grain is yet jeopardised in the north, though Scotland is better off. Ireland, too, is in great peril, with much to be gathered. The agricultural statistics of that country show a decrease in the growth of cereals this season, to the extent of 15,223 acres, which, as this consists of spring corn—take at 6 qrs. per acre—makes 91,338 qrs. deficiency; while the growth of potatoes is 28,510 acres less. This consideration, upon the diseased state of the crop which extends over 1,171,837 acres, shows a heavy void to be filled up, supposing Great Britain supplied. As Maize is the principal substitute, it is sad to hear that heavy rains in Southern Europe are beginning to threaten this important grain, which now keeps continually advancing.

The same paper from which the above quotation comes, brings to us the Government returns of the importation into Great Britain of Agricultural Produce, Live Stock, &c., for the first eight months of the present year, closing Aug. 31, as compared with the same period in 1859. These figures do not begin to show much of the effect of the present bad harvest, and as last year's wheat crop was better in Great Britain than that of the year before, (1858,) the imports had been less up to Sept. 1, in 1860, than in 1859. The expectation there entertained, of obtaining at least 24,000,000 bushels of us out of our present wheat harvest, to which we alluded last week,—and the above statement of the great deficiency now inevitable throughout almost the whole United Kingdom, shows that the following imports, large as they are, must necessarily be greatly increased in amount during the twelvemonth that is now to elapse before the return of another harvest-time.

The Total Imports of Breadstuffs, &c., into Great Britain, then, from Jan. 1 to Sept. 1 in 1859 and 1860 respectively—given in bushels, which is a more familiar expression to us, than the English "quarters,"—are as follow:—

WHEAT—Bushels in 1859,	23,081,960—	in 1860,	20,229,120
BARLEY— do. do.	7,848,392—	do.	11,591,832
OATS— do. do.	8,014,048—	do.	12,982,616
PEAS— do. do.	415,104—	do.	1,400,120
BEANS— do. do.	1,450,936—	do.	2,089,624
INDIAN CORN—Bushels in 1859,	5,221,632—	do.	10,262,432
IMPORTS OF FLOUR AND MEAL TO SEPTEMBER 1.			
FLOUR—Cwts. in 1859,	2,741,237—	in 1860,	2,463,092
INDIAN MEAL—Cwts. in 1859,	2,178—	do.	2,649
LIVING ANIMALS IMPORTED TO SEPTEMBER 1.			
Oxen, Bulls and Cows, number in 1859,	27,650—	in 1860,	34,374
Calves, do. do.	15,499—	do.	13,747
Sheep and Lambs, do. do.	131,908—	do.	141,375
Swine, do. do.	4,985—	do.	7,872
PROVISIONS, ETC., IMPORTED TO SEPTEMBER 1.			
Bacon and Hams, Cwts. in 1859,	81,104—	in 1860,	250,702
Beef, Salt, do. do.	170,919—	do.	230,290
Pork, Salt, do. do.	119,529—	do.	182,277
BUTTER, do. do.	268,192—	do.	464,884
CHEESE, do. do.	229,162—	do.	275,941
Lard, do. do.	66,664—	do.	166,521
Eggs, Number in 1859,	115,538,600—	do.	123,567,600

Consider for one moment what vast sums of money are represented in these tens of millions of Bushels of Grain—in these hundred-weights by the hundred thousand, of Flour and Meats, and Butter and Cheese—that are required to sustain the twenty-seven millions of British people for two-thirds of an ordinary year. And when a season such as that just closing in so darkly over them, vastly diminishes their own immense production—it may be perceived how important an element, financially, their additional purchases abroad must be in the commercial operations of the coming year, and why they turn with some anxiety to ascertain in what other land there is a Goshen to which they may send for the bread of their children and their households. The Quarter Day has passed on which the rent of the half-year is in many cases collected, but, gathered in as it has been, the crop "requires a deal of time to make and harden, either in the rick or in the barn, and tenants who are compelled to send the bulk into the market can only do so with the expectancy of selling it on something the same terms they might a lame horse at a fair, or a sick beast at an auction." And the Farmers' Journals remind the Landlord that it is for his best interest in the long run, not to press too closely a willing but unfortunate Tenant. So the losses of the cultivator begin at once to be felt in the income of the land-holder, and of all the classes and ranks within Victoria's realms, there is none, high or low, that will not feel somewhere the blow which strikes the Farmer—no one that should not learn to pray more earnestly hereafter for Heaven's blessing on the kindly fruits of Earth. Over and over again, we have had in our own national experience similarly unmistakable evidence of the importance of Agriculture as the basis of our prosperity; and over and over again we have practically derided its claims, just as before—those of us who are farmers, by neglecting the improvements within our reach, and those of us who are not, by snubbing or ignoring the Farmer's interests, whenever merchant or manufacturer found it convenient so to do.

☞ The *Journal d'Agriculture Pratique* dating at Paris, Oct. 5, presents a discouraging picture of the weather during the latter half of September, both as regards the ripening of the crops where they are still out and the preparation of the ground for the seeding of another year. In the wine regions, the prospects of a good vintage are no better.

SALE OF DEVONS.—Mr. JOHN CORP of Freetown, Cortland Co., N. Y., has recently sold to SENECA DANIELS of Saratoga Springs, a few pure Devons to go to California, among which are "Fancy," (1268,) bred by E. G. Faile of West Farms. "Fancy" gained the 1st prize as yearling at the New-York State Fair at New-York city in 1854—also first prize at New-York State Fair at Syracuse, 1858, as best Devon cow three years and over; also "Fashion," (1280,) bred by R. H. Van Rensselaer of Morris, and from "Fancy," (1268,) and by imported "Mayboy," (71.)

JOHNSTON'S CULTIVATOR.—Nothing I ever saw, will pulverize land equal to the "Johnston Cultivator." It is *the* cultivator to work corn or potatoes on inverted sod, or any other kind of land—at least on all stiff soils. That Mr. S. E. Tanner may depend upon. JOHN JOHNSTON.

BARLEY—CAUTION.—As usual, at the State Fair held at this place last week, I gave permission to any one wishing samples of my grain to take them gratis; and I understand many availed themselves of the privilege. I therefore deem it proper to say, that the barley I had on exhibition is not of the winter variety, and was not so entered by me; and why it was so classed by the committee on grains, I know not. But their award is calculated to mislead those taking samples, and I would like to have you publish this note, Messrs. Editors, for the benefit of those whom it may concern. B. S. CARPENTER.

Chemung Co., N. Y.

☞ In the List of Premiums awarded at Elmira, published in the last number of the COUNTRY GENTLEMAN, we note that the special or sweepstakes prizes are omitted in the Short-Horn class. In the bull class, the sweepstakes prize was taken by "Grand Duke of Oxford," (16184) imported by JAS. O. SHELDON of Geneva, last fall, and in the cow class, by "Gem of Oxford," a heifer bred by the same gentleman and coming in competition here with "Miss Butterfly" and "Diana Gwynne" as well as with others bred in this country. It is the first time the imported and home-bred stock have come together, and it is both creditable to the breeder, and worthy of particular remark by others, that an animal bred in American hands should bear away the Premium, as "Gem of Oxford" has done, against several competitors imported from abroad and standing in high repute there as well as here.

☞ The Mark Lane Express, in its last "review of the British Corn Trade," thinks that if "through the entire season three million quarters (24,000,000 bushels) of wheat should be imported" into Great Britain from the United States, the limits of its present expectations would be fully reached. According to its quotations of American wheat at Mark Lane (58*s*. to 65*s*. per quarter) this would be equivalent to something like *forty-five millions of dollars* which Britain will have to pay during the current twelve months for our breadstuffs and their transportation across the sea.

Imported Cattle.—The steamship Nova-Scotian brought out some very fine Durham cattle for Dr. Phillips of Ormstown, Canada East. The herd consists of two bull calves and five cows; they are of the purest blood, and were raised by Mr. Richard Chaloner of Kingsfort, Moynalty, and other celebrated breeders in the North of Ireland. The destination of the cattle is Kingston, C. W., where Dr. Phillips is about purchasing a property and intends to reside. His many Ormstown friends will regret his determination to leave their neighborhood.

Caterpiller's Eggs.—"An ounce of prevention is worth a pound of cure," and if you would apply it in the case of these pests of the apple tree, as soon as the leaves fall, look carefully and you will find the eggs of the caterpiller in bands or rings upon the smaller limbs. Scrape them off, and at one blow you destroy hundreds of future depredators. On small trees this can be readily done, and should never be neglected.

☞ What is styled "a *convention* of the descendants of the late celebrated Vermont Black Hawk," was held at the farm of Josiah Crosby, in North Andover, Mass., on the 9th and 10th instants. Sixty horses, of various ages, came together, but we have no accounts as yet of their official action. If there was any motion made to admit reporters, we fear the *neighs* must have had the majority.

Pears on Thorns.—In reply to Mr. Quinby's article on Pears on Thorns, I would say—My experience with Pear on Thorn is, it gives a degenerated fruit, and a short-lived tree. But soil has much to do in this respect. I think the Hawthorn cannot be more legitimately applied than as a fence plant, or as an ornamental shrub. I intend shortly to give you my views on the cause of failure in growing good hedges; and the antidote, if such a term be admissible—otherwise a remedy. W. M. Beauchamp.

Butternut Trees Injurious to Other Plants.—Noticing in an "exchange" an inquiry on this subject, we would state that where these trees are common, it is the general opinion—sustained by facts in the case of every tree—that no crop of much value can be grown under their shade or drip, or as far their roots extend. We have half a dozen or more large ones on the farm, "and know whereof we affirm." B.

Turning Under Stubble.—I noticed a simple arrangement for assisting in turning under stubble, weeds, &c., viz., a heavy trace-chain, with one end fastened around the beam of the plow just where the upright joins the beam, and the other end of the chain fastened to the outside of the doubletree. The chain swung loose, so as to be about even with the unbroken land. By using this, the ground is left in beautiful order, no ends of the stubble and weeds sticking up, to make a jagged, unfinished appearance.

New-Harmony, Ind. GRINDER.

The Annual Register.—It is a most invaluable little annual—worth its weight in gold. It is my reference for many purposes, and I do not see how I could do without it. One of its recommendations has saved me money enough to subscribe for it as long as I live. C. C.

Fegee Island Tomato.—We have raised this variety of tomato for two years, and prefer them to any other kind we have ever seen. They possess the good qualities of large size, thick, firm flesh, and few seeds, as well as a round smooth form, especially adapting them to table use. B.

Pop Corn.—I think I sent you last spring a little pop corn. Enclosed is a little more. I think it is quite an acquisition for the little folks, as its popping qualities are the best I have met with. It is pure, and has been raised here two years from seed from Brazil. The ears are small, but usually several of them are produced on a stalk. I will be pleased to send a little of it to any one enclosing to "A Berry, Raymond, Mississippi," a stamped envelope directed to himself. A. Berry.

California Farming.—On the mammoth farm about fifteen miles from Sacramento, in Yolo county, partly owned by General Hutchinson of the St. George Hotel, was produced, this season, one thousand acres of wheat, one thousand acres of barley, and eighteen hundred tons of hay. The full yield of wheat averaged thirty, and barley forty bushels to the acre; the produce is estimated at 60,000 bushels, at $1.50 a bushel, or $80,000. The hay would foot up $20,000. Thus this farm will yield a total of $100,000 this year. The California Farmer states that the sales of fruit from the farm of G. G. Briggs of Marysville, last year, "were greater than any gold mine in California, amounting to over $100,000."

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[For the Country Gentleman and Cultivator.]

Wheat Growing in Northern Iowa.

Dubuque, Iowa, Oct. 16, 1860.

Messrs. Luther Tucker & Son—I send you a small sample of spring wheat grown upon my farm in Winneshiek county, near the north line of this State. It was grown from seed distributed by the Patent Office as "Turkey Flint," but it is too soft for flint wheat. I raised about 470 bushels from fifteen acres of new ground (brush land, in the edge of the prairie,) that had been badly plowed and much of the surface covered with roots and bushes. Had the land been clean and in good condition, I think it would have produced 50 bushels to the acre, a not unusual yield for other varieties this year in Iowa. One field of wheat in the southwest part of Dubuque Co. averaged 52 bushels per acre. There is scarcely a wheat field to be found that has not exceeded 20 bushels per acre, and the average this year, for the north half of the State, will probably exceed 25 bushels. I refer more particularly to the north part of the State, as it is a better wheat growing country than the southern counties. In this district the soil is composed of the very elements that the perfect growth of wheat seem to require.

The wheat crop of Iowa for 1860, is enormous for a State so young and undeveloped. I have no reliable data upon which to base an estimate of the number of bushels grown in the State. I may at some future time send you a communication on the subject of the adaptability of our soil and climate to wheat growing. John W. Taylor.

The wheat received with the above, was a very beautiful sample—the berry very large and plump.

◆

Remedy for Lice and Ticks.

Eds. Co. Gent.—I noticed a few weeks since an inquiry about the use of tobacco for destroying ticks and lice. The farmers of the Connecticut River Valley have always used tobacco for this purpose in preference to a preparation that might be fatal to the cattle as well as deadly to the vermin. It is used in the form of snuff and as a decoction—for sheep the latter.

There is a preparation of tobacco recently patented by George Jaques of the "Ten Hills Farm," near Boston, son of the late lamented Col. Sam. Jaques, which, from actual experience, and from the testimonials of the most reliable flock masters in this state and in Vermont, I know to be a sure and safe extirpator of ticks on sheep and lice on cattle. It is also said to cure the scab, but as we never have any of that in this country, I know nothing of its effect.

The preparation is a thick fluid like tar, put up in cans, costing 75 or 80 cents per pound, one ounce of which to a gallon of water, makes a liquid sufficiently deadly.

It is cheap, convenient, economical and effectual. It is sold by Fisher & Co., Central Wharf, Boston, who will undoubtedly at once advertise it in your paper.

Greenfield, Mass. J. S. Grennell.

SULPHITE OF LIME—For preserving Cider—with full directions for use. Price, 50 cents per bottle of ten ounces—enough for forty gallons cider. Sent by express anywhere.

WEBB, WALKER & CO.,
Oct. 18—w4tm1t. Utica, N. Y.

FOR SALE.—A very choice lot of

DWARF PEAR TREES,

well grown and very healthy—1, 2, 3, and 4 years old. Price $18 per 100. Also Angers Quince Stocks, one year from cuttings—price $12.50 per 1000. Terms cash in advance. Please address

Oct. 18—w2t. C. H. CURTIS, Waterville, N. Y.

BULBOUS FLOWER ROOTS.—Our annual Fall importations of

BULBOUS FLOWER ROOTS,

are just received from Holland in fine order.

It embraces **Hyacinths, Tulips, Crocus, Narcissus, Jonquils, Lilies, Crown Imperials, &c.**, all strong, sound bulbs, that cannot fail to give satisfaction. Orders should be sent in immediately.

ELLWANGER & BARRY, Mt. Hope Nurseries.
Oct. 18—w1t. Rochester, N. Y.

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REAPING AND MOWING MACHINES

has at length been attained, viz: to render them safe instead of very dangerous, as at present.

This improvement has been perfected and patented by Elizabeth M. Smith, Burlington, N. J., and consists of a device for throwing the cutting bar in and out of gear by means of the driver's seat. Thus, when the driver takes his seat on the machine, his weight throws it into gear, and when he leaves his seat the machine is thrown out of gear. The patent covers the ground of operating by means of the driver's seat.

This circular is issued thus early that all manufacturers may have an opportunity of applying this improvement to their machines for next summer's use. Address DILLWYN SMITH,
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Oct. 18—w13t.*

LAWTON BLACKBERRY.—To obtain the original variety for field or garden culture, address

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☞ Circulars, with ample directions, will be forwarded to all applicants, free. Aug. 1—m12t.

FOR SALE.—900 Acres of land fronting on the Potomac river, 10 miles below Mount Vernon, Virginia, of superior natural soil, well calculated for raising early vegetables, fruit, &c. A part of it is adapted to grain, grass and grazing—will be divided to suit purchasers. For further particulars apply to

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Oct. 18—w2t.

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Editors and Proprietors,
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10,000 New Rochelle Blackberry. Gooseberries, Currants, Raspberries. Grapes—new and old.

5,000 Linneus and Victoria Rhubarb. Downing's Ever-bearing Mulberry.

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Oct. 4—w2tm1t. Raysville, Henry Co., Ind.

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Oct. 18—w4t. H. H. FARLEY, Union Springs, N. Y.

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Sept. 27—wtf. Callanan's Corners, Albany Co., N. Y.

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Buist's Flower Garden,	1.25	Nash's Progressive Farmer,	60
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A. J. Bowman, Utica, N. Y.
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THE ILLUSTRATED ANNUAL REGISTER OF RURAL AFFAIRS.

1861.

THE SEVENTH NUMBER of this attractive and useful Work is now nearly ready for the Press. We hope to have it out some weeks earlier than usual, and are now prepared to receive orders for single numbers or in quantity, which will be filled as soon as the REGISTER for 1861 is issued. The attention of OFFICERS OF AGRICULTURAL SOCIETIES and others who propose attending Town, County or State Fairs this Fall is particularly requested to the ready Sale which may be had for the REGISTER during these anniversaries, and on other occasions, from the First of September even until another spring. TERMS—as heretofore: SINGLE COPIES, postpaid, TWENTY-FIVE CENTS; ONE DOZEN COPIES, postpaid, TWO DOLLARS; ONE HUNDRED COPIES, FIFTEEN DOLLARS, and larger quantities at a farther reduction.

PARTIAL ABSTRACT OF CONTENTS.

Among other valuable chapters, the ANNUAL REGISTER for 1861 will contain the following :—

I. WORKING MEN'S COTTAGES—Seventeen Engravings.
  1. Important Advantages of their Erection.
  2. Design for a Cottage of the Smallest Size.
  3. Design for a Cottage on a somewhat Larger Scale.
  4. Design for a Cottage of better class or for a small Farm House.
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  6. A Design by L. B. Valk.
  7. A Design by J. M. Wade, with modifications.

II. LAYING OUT GROUNDS—Five Engravings.
  1. Plan of a Village Half Acre Garden.
  2. Simple but Graceful Arrangement of Pleasure Grounds.
  3. Laying out a Western Farm.

III. PRUNING AND TRAINING ROSES—Eleven Engravings.
  1. Tree Roses; two modes with figures.
  2. Weeping Roses.
  3. Pillar Roses.

IV. NEW FRUITS AND POMOLOGICAL NOTICES—Twenty-one Engravings.
  1. Basket of Plums—Descriptions and Figures of 15 newer Sorts.
  2. Notes on Strawberries—Results of the Farther Experience of the Year.
  3. Pruning Dwarf Pears.
  4. Accurate Portrait of a Dwarf Pear Tree in Bearing.
  5. How to Obtain Fruit in New Places.

V. STRUCTURES FOR GREEN HOUSE PLANTS—Ten Engravings.
  1. Construction and Management of the Cold Pit.
  2. The Conservative Pit.
  3. Ward's Cases.
  4. The Window Case and Aquarium.
  5. Translucent Paint for Glass.

VI. DOMESTIC POULTRY—Thirty-three Engravings.
  1. Origin of Domestic Fowls.
  2. Descriptions at Length of the Different Breeds.
  3. Management of Poultry.
  4. Five Designs for Poultry Houses.
  5. Nests, Pens, Coops, Feeding Hoppers, &c.
  6. Diseases of Poultry.

VII. WEEDS AND THEIR DESTRUCTION—Twenty-one Engravings.
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  2. Annual and Biennial Weeds.
  3. Simple Perennial Weeds.
  4. Creeping Perennial Weeds.
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VIII. FILTERS, AND FILTERING CISTERNS—Five Engravings.
  1. Construction of Portable Filters.
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X. HORTICULTURAL NOTES.

XI. RURAL MISCELLANY.

XII. DOMESTIC ECONOMY, &c., &c.

XIII. ADVERTISEMENTS

This, preceeded by the usual Calendar pages and Astronomical Calculations, forms a book which is certainly cheap at its retail price, while the Publishers may especially call attention to the pithy and appropriate HINTS FOR THE MONTH which appear upon the Calendar pages, as embracing in the most concise form many valuable suggestions—to the article on WORKING MEN'S COTTAGES, for the neat and useful Designs it contains—to those upon ROSES and GREEN HOUSE Structures for their beautiful illustrations—to that upon POULTRY as the most complete chapter upon the subject yet presented in equal space, accompanied as it is by so many Engravings—and to that upon WEEDS and their Destruction, as presenting just the information which every Farmer requires, with cuts by which he can compare the most common and troublesome of these intruders, and appropriate practical directions how to get rid of them.

THE PUBLISHERS, with the view of rendering the circulation of the ANNUAL REGISTER for 1861, still wider and larger than that of any previous Number, are prepared, as above intimated, to offer the most liberal Terms for its introduction in quantities, either to Agents, Agricultural Societies, Nurserymen, Dealers in Implements and Seeds, or any others who take an interest in the dissemination of useful reading, and in the promotion of Rural Improvement.

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Are easily made without Tile in stiff clay soil, void of stone, sand and gravel, making a GOOD PERMANENT DRAIN. In other soils, fifty rods per day, with Tile drawn in, from one to three feet deep, graded with an adjustable screw through the beam. Correspond with

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TO LET.—A FARM in the town of Moreau,

Saratoga county, of about 300 acres, 200 of which are in wood—with a large and convenient house and all necessary outbuildings, including four barns. It is situated on the bank of the Hudson river, within one mile of the village of Fort Edward, and five of the village of Glens Falls. The station house of the Saratoga and Whitehall railroad is on the premises—thus affording every facility for market. To a person of sufficient means to stock the farm, and who will have some pride in keeping it in good order, favorable terms will be given. Address the subscriber at Moreau Station. W. H. WARREN.

Sept. 26—weow6tm3t.

FARM FOR SALE.—

Two hundred and Eighty acres of good Limestone Land, 4½ miles east of Brownsville, Pa.—two hundred acres cleared and under a high state of cultivation.

Price $50 per acre, 2-5ths of which will be taken in pure bred stock.

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C. & W. McCAMMON,
Jan. 5—wtf.—Feb 1—mtf. Albany, N. Y.

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pared to furnish DRAINING TILE of the first quality, cut 14 inches in length, with a calibre—have on hand in large or small quantities for Land Draining, ROUND, SOLE AND HORSE-SHOE TILE. We warrant every Tile to be hard burned and perfectly round.

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Practical Landscape Gardener, will design and superintend the laying out of Pleasure Grounds, Parks and Cemeteries, &c. Address O. F. THORNTON, Beloit, Wis.

REFERENCES—Wm. L. Ewing, St. Louis, Mo., S. J. Sherwood, N. P. Waterman, R. W. Bruel, Beloit, Wis. July 19—w13t.

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A large stock of strong well rooted plants, for sale by the 1,000 and 10,000, at greatly reduced prices.

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$1 per Paper of 2,000 Seeds; $6 per Quart.

The above seed has been saved in the best possible manner. Sow the seed in seed bed; cover from a quarter to half an inch deep with half sand and half mould. GEO. SEYMOUR & CO.,

Sept. 29—w5t. So. Norwalk, Conn.

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We have for sale this fall, as fine a stock of

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Every Plant sent out is warranted true to name.

Our stock of Delawares consists of 5,000 layers, and two to three thousand plants grown in open air from single eyes, stout and well rooted. 10,000 Concord layers of remarkably large size, and roots from one to three feet long. For farther particulars send for our Wholesale Catalouge of Hardy Native Vines, which will be sent gratis, or two three cent stamps, and get our Illustrated Descriptive Catalogue of Hardy Native Vines. Address

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TREES AND PLANTS. As the season for setting out Trees and Plants is at hand, individuals desirous of making selections, will receive Priced Descriptive Catalogues of any Department of Nursery Stock, by enclosing a stamp to WILLIAM R. PRINCE & CO., Nurseries,
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TO NURSERYMEN AND FARMERS—FOR SALE, (in whole or in part,) TWO HUNDRED AND FIFTY ACRES OF GOOD LEVEL LAND, near the city of Baltimore, and convenient to a turnpike. It is admirably adapted for an extensive Nursery, which is very much needed, as thousands of orders are annually sent North for Trees, &c., which would seek a supply nearer home. For particulars address
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Catawissa, 15 cents each, or $1 per dozen.
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New French Everbearing, $1 per dozen.
Yellow Antwerp, (large fruited,) $1 per dozen.
Plants deliverable this fall or next spring. JOHN WILSON
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Special Business Notices.

☞ For terms of THE CULTIVATOR and List of Premiums to Agents, for 1861, see page 344 of this paper.

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EXTRACTS FROM OUR CORRESPONDENCE.

MASSACHUSETTS—Deerfield, Jan. 5.—You will see by the above, I have secured six new subscribers to the Co. Gentleman, which is much better than I anticipated, considering the multitude of Agricultural papers published. The Co. GENTLEMAN is the most practical—therefore the most reliable of all Agricultural papers that I have read. Mr. Johnston's writings are worth more than twice the cost of the paper, and I wish every farmer in the land could be made to think so. To him who feels really interested in Agriculture, and likes to read about it, the Co. Gentleman would be a welcome friend. J. C.

WESTERN NEW-YORK—Fredonia, Jan. 21.—It is now twenty years since I became interested in agricultural papers, and I have every year devoted a little time to extend their circulation. It has always been a matter of surprise that farmers are so unwilling to read about their own occupation. The first year I read the Cultivator I could directly point to a pecuniary benefit by so doing of $14. In canvassing for subscribers, an incident or two I mention. I asked a driving farmer to take the Cultivator. He gave a positive "no." Said he, "I have a brother that took it one year, and it came very near ruining him." It was hard work in those days to get half a dozen readers to the Cultivator. But a change is working. The full grown "Country Gentleman," with his pleasant face and good advice is now a welcome visitor in a score of the farmers' homes, and his weekly visits are deemed about as important as the "cruise of oil."

A friend said to me the other day he wanted the Country Gentleman. "That little Register you sold me a year ago was worth $34 to me last year."

Let the farmers of America be an "institution" of themselves—their sons and daughters have an education appropriate to their calling, and not to be ashamed of their profession. Soon they will know and assert their rights, and give us laws that will be wholesome, and for the general good, and wrangling demagogues who only squabble for the "spoils" will be elected to stay at home. A. S. M.

MARYLAND.—Royal Oak, Jan. 4—About one year ago I left the counting-room in the city, to undertake the more arduous duties of the corn-field. Being almost wholly unacquainted with the business I was then about to engage in, I naturally sought information from every available resource. One of the first publications I subscribed for was the COUNTRY GENTLEMAN, mine being, I believe, the only copy taken in this part of my county. I have for one year been a careful reader of its neatly printed pages, and now look upon it as a friend with whom I cannot part. What advancement I have made in farming during the year I will not pretend to say, but I can say that I am under obligations to the Gentleman and its correspondents for nearly all I do know upon the subject of agriculture and farm management generally. The two dollars invested at the beginning of 1859, has paid much more than compound interest. As an evidence of my appreciation, I have been endeavoring to extend its circulation and influence among my neighbors, and as the result of a day or two's effort, send you eleven additional subscribers. I trust to increase the number before long—and shall always be careful to speak a good word in your behalf whenever an opportunity offers, hoping your circulation may increase an hundred fold. J. L. R.

KENTUCKY—Maysville.—I now have the COUNTRY GENT. complete from No. 1, Vol. 1, to date, well bound, well read, and I think I have pocketed more money by it than any individual west of the mountains, "in a quiet way." J. B. P.

CANADA WEST—St. Thomas.—I cannot take leave of the "COUNTRY GENTLEMAN" for 1859, without acknowledging the benefit of his acquaintance, and the pleasure derived from his "sayings and doings,"—especially from his "Notes from Abroad." S. K.

CANADA EAST—St. Armand, Jan. 10.—I have been a convert to your valuable journal the last year, and can highly recommend it to every tiller of the soil, as being worthy of introduction to their homes, and would urge it upon every farmer that can clear two dollars from his farm, to forward it to you for the COUNTRY GENTLEMAN, hoping it will be with them at the end of one year, as it is with me at the end of the past; if so, they will not be without your journal for ten times its cost. Now brother farmers send for a copy and read for yourselves! M. J. D.

THE CULTIVATOR.

THIRD] TO IMPROVE THE SOIL AND THE MIND. [SERIES.

VOL. VIII. ALBANY, N. Y., DECEMBER, 1860. No. 12.

Terms and Premiums for Cultivator Subscriptions for 1861.

The success which has this year so generally attended the exertions of our Farmers, should encourage them to renewed effort to render their pursuit a more remunerative and less hazardous one hereafter—while at the same time it places additional means within their reach for the Acquirement of Information and the Study of the Experience of others.

"It is now seven years or more," writes an Indiana subscriber, whose letter we open just as this Number goes to press,—"since I commenced taking THE CULTIVATOR, and most of this time I have taken two or three other Agricultural papers. Some of these I must now discontinue, but THE CULTIVATOR I must have, because it suits me and is the CHEAPEST PAPER that I ever took at the price, and it is also regular to hand, while some of my other papers fail of coming and give me a good deal of trouble and vexation. I will try and send you other subscribers."

It is the extreme cheapness of this Journal, in proportion merely to the amount of matter it contains to which we call attention, because in this respect, aside from the extent of its Correspondence and the number of its Illustrations, it has no rival we believe in our periodical literature, and because—such being the facts of the case with regard to THE CULTIVATOR alone,—their force is greatly increased when each Club subscriber is also presented with a copy of the ANNUAL REGISTER with its additional stores of information and engravings. When $5 is sent for 10 copies of the CULTIVATOR and REGISTER—each FIFTY CENTS pays for a total of over FIVE HUNDRED PAGES, embellished with nearly THREE HUNDRED instructive as well as ornamental illustrations!

It thus presents a double claim—upon those whose circumstances necessarily limit their expenditure for reading, as at once the CHEAPEST AND THE BEST BY ITSELF, and upon those, who, like our correspondent above quoted, also take other Journals of a similar kind, as presenting in addition to them MORE MATTER AT THE PRICE than can be obtained in any other form.

Will not, then, evrey friend of Agricultural Improvement into whose hands this Number may come, exert himself somewhat, to place THE CULTIVATOR AND REGISTER for 1861 within the reach of as many as possible of his neighbors and associates? To begin with, FIVE DOLLARS will pay for *Ten Copies* of THE CULTIVATOR and *Ten* of the ANNUAL REGISTER for 1861—*with an eleventh copy of each free for yourself.* And

AS PREMIUMS FOR LARGER CLUBS we have made arrangements with B. K. BLISS, the well known Seedsman of Springfield, Mass., to supply us with various assortments of

FLOWER AND VEGETABLE SEEDS,

As put up by him for mailing to all parts of the country for several years past, with unparalleled success and satisfaction to his numerous customers. The Assortments are:

FLOWER SEEDS.

1. Twenty Choice Varieties of Annuals.
2. Twenty Choice Varieties of Biennials and Perennials.
3. Ten Extra Fine Varieties of Annuals and Perennials—embracing many of the new and choicest in cultivation.
4. Five very Choice Varieties selected from Prize Flowers of English Pansies, German Carnation and Picotee Pinks, Verbenas, Truffaut's French Asters and Double Holyhocks.
5. Fifteen very Select Varieties of Green House Seeds.
6. One Hundred Varieties of Annuals, Biennials, and Perennials, including many new and choice varieties.
7. Fifty do. do. do.

VEGETABLE SEEDS.

1. Twenty Choice Varieties, including those most in demand in every Garden, with the exception of Peas, Beans and Corn, which cannot be sent by mail on account of their weight.
2. Forty-five Choice Varieties, including a still wider assortment than that above named, and with the same exception as regards Beans, Peas and Corn.
3. Collection to go by Express, containing a complete assortment of everything wanting in an ordinary garden, in quantity sufficient for a family of moderate size—for instance, a quart each of four varieties of Peas to ripen in succession, and other seeds in proportion.
4. Collection to go by Express similar to No. 3, but on a larger scale throughout, and including about SEVENTY-FIVE VARIETIES!

I. These different assortments may be recommended as judiciously selected, well put up, reliable in character of seed, and in all respects worthy of confidence, and we will send Postpaid to the Agent from whom we receive TEN DOLLARS *for Twenty copies of the Cultivator and Register for* 1861—either ONE of the following Assortments;

No. 1--Flower Seeds.
No. 2--Flower Seeds.
No. 3--Flower Seeds.
No. 4--Flower Seeds.
No- 1--Vegetable Seeds.

II. The Agent sending THIRTY SUBSCRIBERS and FIFTEEN DOLLARS, may select either of the above named assortments, and will receive in addition a Free copy of the CULTIVATOR and REGISTER for himself.

III. The Agent sending us FORTY SUBSCRIBERS and TWENTY DOLLARS, will receive a Free Copy of the CULTIVATOR and REGISTER for himself, and may in addition select any TWO of the above Assortments—or in place of the latter, either assortment

No. 7--Of Flower Seeds, or
No. 2--Of Vegetable Seeds.

IV. The Agent sending us FIFTY SUBSCRIBERS and TWENTY-FIVE DOLLARS, will receive a Free Copy of the

Cultivator and Register for himself, and in addition either of the following as he may select:

The First FOUR Assortments of Flower Seeds; or any one of them, together with either No. 5, or No. 7—

Or, Any two of them, together with No. 2, of Vegetable Seeds—

Or, No. 3, of Vegetable Seeds, with either No. 1, 2, 3, or 4 of Flower Seeds, as preferred.

V. For SIXTY SUBSCRIBERS and Thirty Dollars, an extra copy of Cultivator and Register, together with either,

Assortment No. 6, of Flower Seeds—or

Assortment No. 4, of Vegetable Seeds, as may be preferred.

☞ In any case where extra copies of the Cultivator and Register are preferred, they, or Agricultural Books to an equivalent value will be substituted upon the request of the Agent.

Members of Clubs may receive their papers at Different Post-Offices.

Subscribers in the British Provinces will add 6 cents per copy to the above terms, to cover American postage to the lines.

The Register Postage Free.—We shall prepay the postage on all copies of the Annual Register without charge to the subscriber.

The Country Gentleman.—All who are desirous of receiving a Weekly Journal, are reminded that the Country Gentleman is the only one exclusively devoted to the Practical Interests of the Farmer, in the Field, in the Garden and Orchard, and at the Fireside. ☞ In obtaining the Premiums above offered, a subscription to the Country Gentleman at $2 per year, will count the same as Four subscribers to The Cultivator, and the subscriber to the Co. Gent. will receive one copy of the Register. ☜

The Country Gentleman and the Register—Terms to Clubs:—Two Copies Co. Gent. and Register for $4—Five Copies of both for $9—Ten Copies of both for $16.50. ☞ A Premium Copy of both the Country Gentleman and Register will be sent free to any one sending us a Club of Ten, and for any addition to this number the rate will be $1.65 for each Subscriber, and a free copy for each additional *Ten.* ☞ Subscribers in the British Provinces must in all cases add 25 Cents for each subscriber to cover the American postage to the lines.

Specimen Copies of both Journals sent on application, with Showbills and Prospectuses—also, if desired, *a copy of the* Annual Register *for use in canvassing for Subscribers.* ☞ EVERY READER IS REQUESTED TO ACT AS AGENT.

The Annual Register for 1861.—See Advertisement and Notices of this work in other parts of this paper. *One Dozen* Copies of the Register alone are sent *post paid* for TWO DOLLARS. Address,

LUTHER TUCKER & SON,
Albany, N. Y.

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Salt, or Lime and Salt, to Prevent Grain Crops from Lodging.—In looking over our foreign exchanges we not unfrequently meet with passages like the following, from which we infer that the power of salt to strengthen the straw of grain crops, even when the growth has been rendered very luxuriant by guano or other nitrogenous manures, has been often tested, and is now *well established:* "When the crop is liable to lodge from a weakness in the straw, three cwts. of salt per acre should be mixed with the guano. Lime and salt will prove equally beneficial, but this dressing is more expensive, while the lime and salt require to be mixed for some weeks previous to application to the land."

SUGGESTION TO YOUNG MEN.

A Canadian correspondent of the Co. Gent. makes the following suggestion, which is well worth the attention of the sons of all of our farmers:

"Could not the younger branches of your agriculturists form 'Societies for Mutual Improvement,' and twice a month or so meet for the purpose of instruction? Let a President, Vice-President, and Secretary be chosen—let them read such books *aloud*, the "Country Gentleman," or "The Cultivator," "Johnson's Lectures on Agricultural Chemistry," and others of a like nature; then let every young man explain his ideas, or *ask for information* on such subjects as he does not fully comprehend. The young men may discuss the practice of their own parents, and by a mutual interchange of ideas acquire a great deal of knowledge. Let each member, after the first meeting, agree to bring some plan of buildings, implements, &c., that may be deemed important or worthy of notice. Some may bring a new plant, fruit, or weed even, and let those who are capable describe each. They may in time be able to form a mutual assistance fund, so as to help such as need it to purchase some of the more expensive machines, as mowers, reapers, &c., the person assisted to pay back to the fund a certain portion of his earnings with the machine, until the claim is settled. Then another may be assisted in like manner to some other implement. An almost unlimited amount of good may be accomplished, provided that all their transactions are founded upon honor, truth and equity." Rusticus.

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The Season and Crops Abroad.—The London Ag. Gazette speaks of the agricultural twelve-month closing with the 1st of October in the following brief and pointed way—"the warmest and the coldest October almost ever known—a cold and wet November—a very cold December, falling 25° below the freezing point and ending in warm rain—a mild and dry first week in January, followed by a latter half extremely wet—a very stormy, wet, cold February—a snowy, cold, wet, stormy March—excessive rains and storms in April—a very wet and stormy May—a cold, wet, unseasonable June—dry during the first fortnight of July, but rainy afterwards and cold throughout—a very wet, inclement August—a September partly fine and partly wet, and rain almost ever since. We have had twelve months of unusually low temperature, excessive rainfall, and tempestuous weather."

The same paper for Oct. 27, contains Harvest Reports from all parts of the United Kingdom, at a date late enough to admit of pretty complete examination of the crops and after some trial of them by the threshing machine. "It is plain," says the editor, "that our former statement of the case, complained of by some as presenting too gloomy a picture, has erred in not being dark enough. There was a bulky crop of both oats and barley on the ground, but both—the latter especially—have been injured by bad weather. There never was the promise of an average crop of wheat, and what there was has also suffered much. As a general rule, oats will still be a fair crop. Good samples of malting barley will be extremely rare, and wheat will yield unusually below its average produce. Of green crops, we have to report that potatoes are almost universally a failing crop. Turnips generally are very poor, the exceptions in both cases being found in the northern counties; while mangels are universally inferior and unproductive, and good hay is both scarce and dear. Both man and beast will have to draw on whatever may be stored from former years for their food supply during the coming winter."

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Modern education too often covers the fingers with rings and at the same time cuts the sinews of the wrists.

AMERICAN AND ENGLISH PLOWS.

I would like to know L. H. T.'s opinion of our long-handled, long beam, heavy Scotch plow, such as he saw at the Provincial Fair. Does he like them as well as our improved light plows for cleared land? A. H. *Bronte, C. W.*

Admirable as is the work performed both in Great Britain and by the Scotch farmers of Canada West, with the long heavy plows they so universally use, we cannot, ourselves, help preferring a somewhat different style of implement. And the above inquiry from a respected correspondent across the lines, affords us the opportunity of presenting some illustrations of the English or Scotch plow, which may be of interest to those who are not already familiar with its appearance and construction.

If, however, the writer is correct in his notion of the common Canadian plow, it is considerably less light and graceful to the eye, and probably heavier in draught as well as weight, than the latest improved English plows, some of which latter are about as long and sharp as a Yankee clipper, and look as though they might cleave the the land as easily as it does the water.

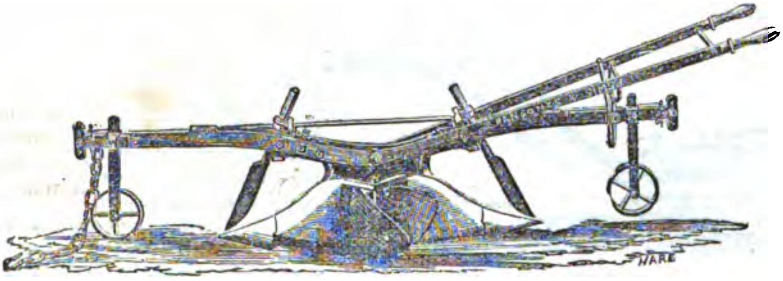

Fig. 1. Lowcock's "Turn-wrest Plow."

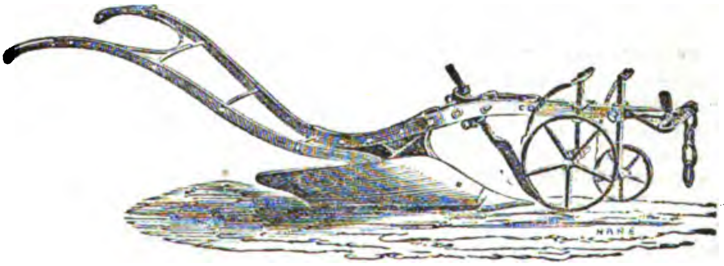

Fig. 2. Ransome & Sims' "Y. L."

Before endeavoring to reply more particularly to the question propounded above, let us glance briefly at several of the more prominent kinds of British plows. And in doing so, I may mention at the outset, that what is in England called a *turn-wrest* plow, answering in effect to our *side-hill* plows, appeared to me to be more ordinarily in use there than the corresponding kind of plow is here. I find that Morton's Cyclopedia places it first among several descriptions given. Its object of course is to turn all the furrow slices in the field in one direction. By alternating the mould-board of the plow, when it turns at the head land, from one side to the other of the point, we generally accomplish this purpose in a very simple and easy way. But the English manufacturer makes a *double plow*, with the handles lifting on a pivot, so that it can be held at either end according to their position. Of this sort is the Lowcock plow—manufactured by Ransome & Sims at Ipswich, of which we give an engraving, (Fig. 1.) The price at which it is sold is £6 17*s*. 6*d*. (in the neighborhood of $34.) Comin's plow—another *turn-wrest*—is more similar to our *side-hill* in principle, although much more complicated in the way in which it is carried out. There is a third kind, originated I think near Glasgow, in which there are two mould-boards, turning upon a horizontal rod above the plow-beam, so that when one of them is in the ground the other furrows the upper atmosphere at an angle of forty-five degrees or thereabouts. Certainly in this direction, I doubt if we can advantageously imitate our English brethren.

To come now to other plows, we find them divided into two classes, the *wheel plows* and those without wheels, or *swing plows* as they are called by English farmers. Mr. Melvin, an extensive cultivator not far from Edinburgh, with whom I had the pleasure of an interesting conversation on this subject at the Highland Society's Show last year, remarks that it is not a hundred years "since the only plow in use in Scotland was rude, cumbrous, unwieldy, and usually drawn by eight oxen;" the substitution of horses instead of oxen, he continues, "necessitated a lighter implement," and I shall perhaps be safe in adding, that it is only by carrying the improvement somewhat farther in the same direction in which the manufacturers there have begun it, that we have reached the light and easily managed plow now so well known by the American name. Some of our best plows, without the assistance of the two large wheels which serve to guide and steady in its place the English plow, will do nearly as good work if left to manage themselves, as they will with a plowman—and if the same thing can scarcely be said of the English wheel-plow, far less could it be affirmed of those without wheels,—and I doubt if, in either, it ever formed a prominent object either with the farmer or the maker. This may be because our farmers mostly do their own plowing, and thus are led to render the task as little laborious as possible, by contriving or patronizing a plow that will almost *run alone;* while in Great Britain, on the contrary, it is committed to hired hands, brought up to manage a plow as almost the sole purpose of life and education, and becoming so proficient by laborious practice that the convenience of a change is now overlooked or controverted by their employers.

Fig. 2 represents one of the most successful of numerous patterns manufactured by the extensive Ipswich makers. "Y. L." is the mark by which it is designated. Of this and similar implements of other manufacturers, Mr. Melvin remarks—almost making an objection, it will be observed, of the very point in which they verge most nearly upon our American plow, that of taking care of themselves in some degree, instead of requiring such constant exertion in the plowman:—"None of these very beautiful implements," he says, "please the Scotch farmer in plowing lea, as they turn the furrow rather flat over; but they unite in a high degree those contrivances which go far to make up for the guiding hand of man. They have long finely shaped mould-boards, rather short broad shares, straight coulters, and with the two wheels on level land, can almost move unattended. It is difficult to lay off land into ridges with them, and drilling cannot be done, neither do they answer for the mode of plowing which is called *gathering* in Scotland [described in Letter xv, Co. Gent. Sept. 15, 1859,] as the space which is left when the last furrows are taken out is very broad; and they don't make the neat close finish, that the swing-plow, when well handled, does. It may almost be said, that, with the wheel-plow, it is the plow that does the work; with the Swing, it is the man."

For this "Y. L." plow there are upwards of twenty varieties of mould boards made, "adapted," say the manufacturers, "for every description of soil; and by changing the mould board only—as was the case in the great trial at Southampton in 1844—it will answer equally well for heavy as for light land, and upon the occasion referred to, it obtained the double prize of the Royal Agricultural Society 'as the best plow both for heavy and light land.'"

Another kind of plow is made by the same firm for Ridge culture, to which, as above remarked, the "Y. L." is not well adapted. This is shown in fig. 3, fitted with a share of 12 or 15 inches' width, in which form it "will open and close the land in ridge-work, at any distance, where the manure is deposited; it also serves the purpose of setting out lands for common plowing, or opening surface drains."

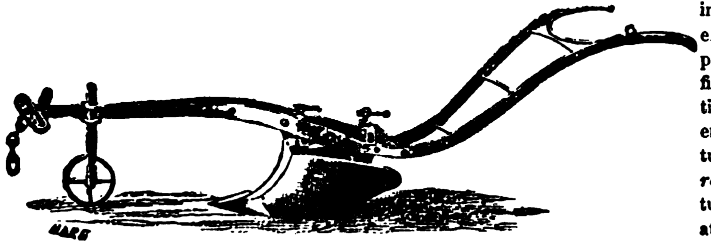
Fig. 3. Ransome & Sims' Universal Ridge Plow.

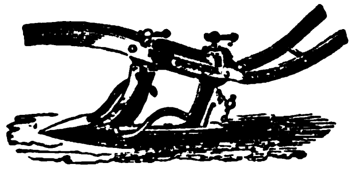
Fig. 4.

By shifting the fittings accompanying this plow, it is made to assume several different forms—serving as a "moulding plow" in moulding up root crops, peas or beans, as a horse hoe or scarifier, or, as shown in fig. 4, as a skeleton or broad share plow. The use of this last mentioned kind of plow was referred to at some length in my letters from Kent, where it is in high esteem for the purpose of breaking up the soil, leaving it in the best state of pulverization, or merely for cutting up weeds, in which case the prongs are no put on. I found the practice there in consonance with the observation annexed in Ransome's Catalogue, viz., that "by broad-sharing or skeleton plowing in the autumn, not only is the soil brought into a pulverized state, but the seeds of annuals, roots, weeds, etc., are stimulated to vegetate, and grubs, worms, and the larvæ of insects are destroyed;" and he adds the hypothesis that "by promoting the attraction and deposit of vegetable effluvia, extensively given off by decayed vegetation at this season the productive powers of the soil are much increased."

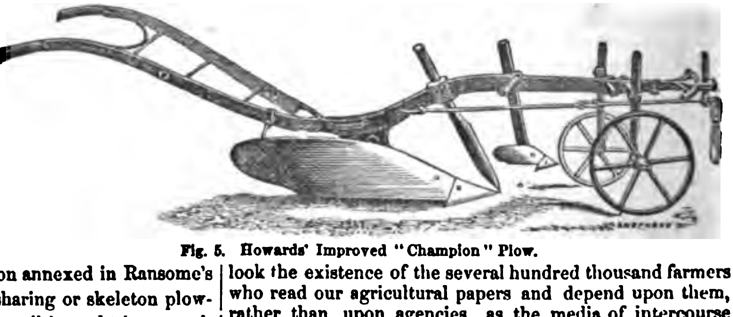
Fig. 5. Howards' Improved "Champion" Plow.

Another favorite plow is that of the Howards at Bedford, shown in fig. 5. They seem to have secured easier draught than most of their competitors, and have received many important prizes, including ten first prizes from the Royal Ag. Society of England, and the Gold Medal of Honor at the Paris Universal Exhibition. In fig. 6 is shown their *double furrow* plow, which is intended for light land where two furrows can be turned at once without over-burdening the team. They make also, among other varieties, a *double-breast* or ridging plow, which is represented in fig. 7, accompanied, as will be observed, by a marker to determine the distance of the next drill. In this plow the breasts are made of steel, and can be readily expanded or contracted to any desired width, either together or independently of each other.

So much for some of the manufactures of two of the largest implement making firms in Great Britain. Reverting now to the comparative demand existing for English and American plows in other countries, we shall find, I think, that even on the continent of Europe, where it has hitherto been supposed that any agricultural implement to be really *first-rate*, must be of English manufacture, our plows are just beginning to attract attention; there have been statements published of considerable exportations of them from this country to Syria and Russia, while in England's own colonies—new countries, where the cost of labor would naturally lead to the selection of the most "labor-saving" kind of implement—it is well known that our manufacturers are securing a large share of the trade. In the Co. Gent. for Nov. 24, 1859, we quoted a statement from the Mark Lane Express that of *forty-two* kinds of plow shown at the Ag. Exhibition at Cape Town, in Africa, "for English colonists to purchase," *the whole* were of American make—not an English manufacturer being represented. At that time we suggested that some of our correspondents interested in the matter, should furnish for publication the details of this same trade as carried on with Australia, but unsuccessfully—many of our larger manufacturers being apparently so engrossed with these shipping operations, and with their few scattered business correspondents at one point and another, as to quite overlook the existence of the several hundred thousand farmers who read our agricultural papers and depend upon them, rather than upon agencies, as the media of intercourse with all the principal establishments, horticultural or agricultural, in our chief cities.

The Official Tables of our Exports published at Washington, throw no light upon the value of agricultural implements sold to otrhe countries; for, strange as it may seem, while they descend to such items as 'printing presses,' 'candles,' and 'combs,' — plows, horse-powers and hoes are left in the heterogeneous mass of 'manufactures of iron,' or 'manufactures of wood.'

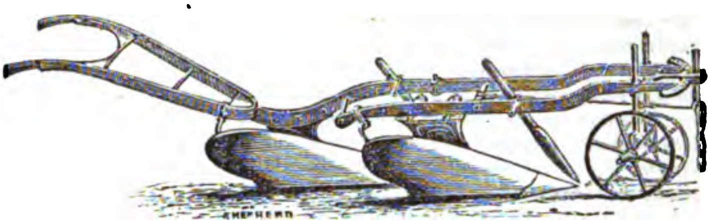

Fig. 6. Howards' Double Furrow Plow.

In conclusion I make an extract from a private letter from John Johnston with regard to the inquiry with which I began. He says; "For more than thirty years I have known the long heavy plows used in Canada to be a very unprofitable plow to work with, having tried one here myself about or over thirty years ago. They ought all to be beaten into plowshares [of another pattern] or pruning hooks. But the Scotch and English Canadians were so prejudiced against the Yankee plows, that I was afraid to come out in print against theirs, although I told them often that their plows were not only horse killers, but men killers also. On a two weeks' tour in Canada, from which I have just returned, I find, however, that many farmers have laid aside their long 250 lb. plows, and are using plows made of the pattern of ours. At Oshawa they make cast-iron plows similar to those in use here; they also make plows with steel mould boards, similar to those made by Messrs. Remington, Markham & Co. of Ilion, in our State, but not equal to them, I think. Indeed it won't be many years until these long plows will be only things that were once in use—at least, this is my opinion."

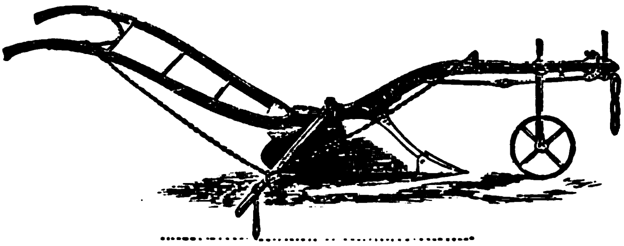

Fig. 7. Howards' Ridging Plow.

As coming from a man of so long practical experience, this opinion is entitled to weight, but lest our friends across the line should suppose that the admirable character of their *plowing* is not appreciated by Mr. Johnston, we may refer them to his letters published in the Co. Gent. after a Canadian tour last autumn, in which he speaks most eulogistically of its excellence. L. H. T.

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Stock and Dairying on Grain Farms.

"A mixed husbandry" has always been found most successful and profitable, because it is in some sense self-sustaining, and also that all branches seldom fail alike or at the same time, always leaving the farmer one or more good crops or products to depend upon. Grass-growing and stock-feeding, to some extent, must be combined with grain-raising in order to keep up the fertility of the soil for the latter purpose—the production of grain being an exhausting process, while stock-growing and dairying furnish means for constantly improving the soil. Wool-growing has paid well on grain farms, especially under an attentive management, and it will be found that careful and thorough farmers receive by far the greatest profit from their stock—cows, sheep, beef cattle, swine, and horses.

Our present purpose, however, is to offer a few hints on dairying on grain farms as a business, and as compared with other forms of stock-growing, and also to offer a word of caution. It must mainly be confined to the production of butter, because few farms are large enough to allow the keeping of a sufficient number of cows, (and at the same time keep more or less sheep, horses and swine, and raise grain,) to produce cheese very profitably. We see that this is the case in Western New-York, from the comparative prices of the two products, cheese being much more profitable than butter, though the latter is now in improved demand. Butter can be made from any number of cows, but a cheese dairy would be a small affair with less than fifteen or twenty cows, and would pay much better with twice that number.

We are inclined to think that every farmer who keeps cows on a grain farm, should not stock his pastures entirely with them, but keep besides sheep, in favorable localities, also a few steers or beef cattle. And this for two reasons; first, that they require far less labor in their care, and the same feed will keep them in good growing order, and constantly increasing in value. In the second place, our pastures depend largely upon the season—if favorable for grass, we have a large supply—if unfavorable from drouth or frost, we find cows getting very poor, the product of milk small, and the number of animals entirely disproportioned to the food we can furnish. We have a remedy for this, to some extent in growing green crops for soiling, or in selling off a portion of the herd, but at such times the green crop does not grow very luxuriantly, and cows are very dull of sale; every one has more than he knows well what to do with. But young stock could be sold more readily—very readily if first fattened on grain—and we could thus without loss reduce the stock to accord with the product of the pastures.

Some years ago, and in a very different grass season from the present, this subject was brought to our attention, by the suggestion that "more stock" was the great want of the wheat-growing region of the State. We remarked that more stock required more pasture, as well as more hay and grain. It needs nice calculation to balance the one to the other three, especially when a dry summer follows a wet one, and farm pastures which the first year would carry six cows and fifty sheep, will barely yield half the number a scanty living the succeeding year, and meadows produce in like proportion. There is an essential difference in the profit of feeding swine when grain is scarce and high, and when it is plenty and low, and so of making beef or mutton. It may be better to sell grain than to feed it out, or at least may figure up so. A difference of ten cents in the pound on wool, is often a difference of profit or loss in sheep, especially when one finds his farm overstocked with them, as seems very likely to be the case with many farmers next season. A month's extension of winter weather and the season of foddering, turns the scales heavily against "more stock," when one has hay to buy, while the cereals may not be injured in productiveness by the lateness of the season.

Perhaps this word of caution is now needed. We have had a remarkably productive season—grain, grass, roots, fruit—the earth fairly groans with its burden. We could feed a large increase of stock, and grow more grain than ever, if sure of such seasons regularly hereafter. But *we are not*, so let us be moderate in our anticipations and preparations for rapid money-making, and take care of the present and the gifts a bounteous Providence has already bestowed upon us. It will not do to over-stock our farms, neither will it answer to over-crop them—one course is as ruinous as the other to the farmer's advancement. If the stock now owned by every farmer is *thoroughly well-wintered*, its value next spring will be nearly double what it would be under the usual management, take the country together. Here is a great chance for profit, and a good use of our plentiful products, and this seems to be the point or moral of our article: Make the best of what you have, and eschew speculation and covetousness.

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[For the Country Gentleman and Cultivator.]

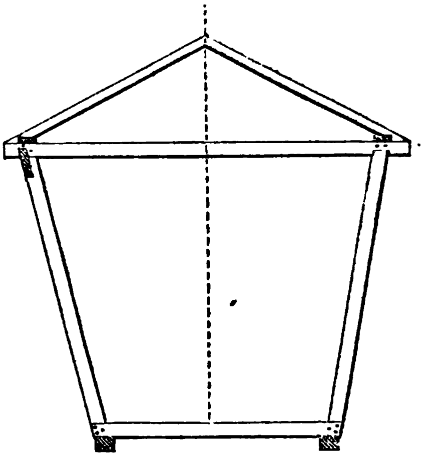
"BALLOON FRAMES"--7th Article.

To convey an idea in the most effective manner, it must be delineated; pages of print will fail, while a charcoal sketch succeeds, and written and verbal descriptions, although good in their place, must yield to a drawing that expresses plainly its intention. We have sometimes thought, after we had labored hard to make an article intelligible, whether all understood it alike, or understood it at all. We strive to condense, to say as much as possible with the least number of words; and in architectural, mechanical and engineering details, a drawing is the "multum in parvo" that expresses our intentions. To one not accustomed to use, or unfamiliar with the object of working drawings, it requires some argument to convince them of their utility; but the world of talk and time that is saved, in telling another how long, how wide, how high, and in what manner, &c., you want your woodshed constructed, suffices to doubly pay the cost or trouble of preparing such drawings as express exactly your wishes. It is only within a week that our attention was called to an out-house that was built without a plan, and as the mechanic said, as well built and in as good proportion as if he had had a dozen architects. The defect was, that it was one-sixth longer than was necessary, and had cost $100 more than if ten dollars had been expended for a well studied plan. We have even arranged furniture in a room, by first drawing the floor plan to a scale, and then with pieces of paper, the size of the ground plan or horizontal projection of each piece of furniture, have arranged them to suit us—instead of wheeling a piano or sofa into every recess to see whether it would fit and harmonize with the rest of the furniture. A certain knowledge of mechanical drawing would be of service to everybody, and particularly to the agricultural community, who are more in the way of developing principles that are new and valuable, and which ought to be communicated for the good of each other.

We were led to these remarks, as we propose to illustrate the balance of our articles on this subject, showing the application of the Balloon Frame to all classes of wooden buildings, commencing with a Corn Crib.

We show in the engraving a half section of two modes of framing. The lumber or timber may range in size from 2 by 4 up, according to the capacity required—2 by 4, except for floor timbers and sills, is sufficiently large for the ordinary size of these buildings.

Where the building is supported on posts, heavy sills are necessary, and the frame should be securely nailed or spiked together. The bents may be 16, 24 or 30 inches apart, and covered in the usual manner. The thrust of both the rafters and contents of the building are outward; the tie, 1 by 4, is abundantly strong, as each one will practically sustain in the direction of its fibre, three tons. The floor joists are nailed to studs at each end. No one need fear any lack of perfect security, as it surpasses in strength any hold that a tenon could have.



No. 1. No. 2.

There are many ways other than those shown, of constructing a "Balloon Frame" for a building like this, and many original plans will suggest themselves to a thinking mind that undertakes their construction, and is familiar with their principles. Light sticks, uninjured by cutting mortices or tenons, a close basket-like manner of construction, short bearings, a continuous support for each piece of timber from foundation to rafter, and embracing and taking advantage of the practical fact, that the tensile and compressible strength of pine lumber is equal to one-fifth of that of wrought iron.

The Balloon frame has for more than twenty years, been before the building public. Its success, adaptability, capability, and practicability, have been fully demonstrated. Its simple, effective and economical manner of construction has very materially aided the rapid settlement of the West, and placed the art of building, to a great extent, within the control of the pioneer. That necessity, that must do without the aid of the mechanic or the knowledge of his skill, has developed a principle in construction that has sufficient merit to warrant its use by all who wish to erect in a cheap and substantial manner any class of wooden buildings.

We call attention to this manner of framing corn cribs, as we believe money enough can be saved, which, if judiciously invested, will supply any one with the "COUNTRY GENTLEMAN" for the rest of his natural life.

GEO. E. WOODWARD,
Architect and Civil Engineer, 29 Broadway, N. Y.

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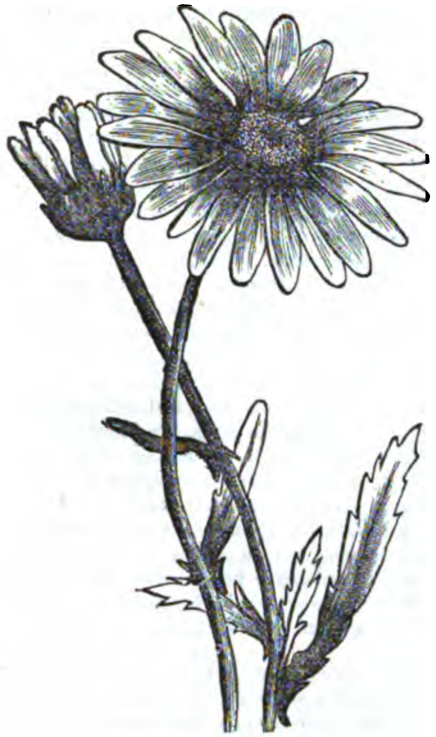
Gas Tar Injurious to Fruit Trees.

EDITORS COUNTRY GENTLEMAN—In your issue of 8th March I notice a communication from H. H. EMMONS, relative to the application of gas tar to fruit trees, and although rather late to offer any suggestions on the subject, I am induced to give you the result of my own experience, trusting that it may prevent others from attempting so injurious an application.

Some years since I read in an agricultural paper, that an application of gas tar to fruit trees would prevent the depredations of mice, and our section of Canada being that year overrun with those pests, I was induced to try it, the consequence of which was, that I was near losing all or most of my trees. It certainly succeeded in keeping away the mice, but the succeeding summer the tar became so hard that the bark could not swell, and I was obliged to make a perpendicular slit in the bark as far as the tar extended, to save my trees. It is in my opinion a most dangerous experiment, and if your readers would keep their orchards clean, and leave no harbor for vermin, there would be no necessity for using gas tar or other application.

JAMES TAYLOR,
Prest. St. Catharines Hort. Society.



THE OX-EYE OR WHITE DAISY.

Leucanthemum vulgare.

A perennial-rooted weed, and one of the worst the farmer has to contend with. on account of its extensive spreading, and the great difficulty of its extirpation. The seed are very tenacious of life, and will vegetate after passing through the stomach of an animal. The wide foothold it has obtained, is of course the result of slovenly farming, and is most conspicuous in pasture fields, whitening the whole surface when in flower. Various means have been devised for destroying it. Attempts have been made to turn it to account by compelling animals to eat it. Sheep may be made to feed on it by depriving them of all other food, especially early in the season, while the young plants are tender and less bitter than afterwards; but it is bad economy, and they cannot thrive when driven by starvation to eat unpalatable food. A correspondent of *The Cultivator* says that a large farmer succeeded in killing most of the daisies on a sixteen acre lot, by turning in five hundred sheep a week at a time—but it was a very expensive experiment, for the sheep became extremely poor, and he regarded his loss at one thousand dollars. Thorough cultivation is the best remedy, and may be given as follows: Plow the sod thoroughly, plant corn, hoe and cultivate well once a week. Next year sow and plow in two crops of buckwheat, and the third year manure and plant corn again; then again two crops of buckwheat for two years more, when the daisies will have vanished, and the land be left rich,—*Tucker's Illustrated Annual Reg.*

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Fattening Hogs in Warm and Cold Weather.

A correspondent of the Ohio Farmer, writing from Duncan's Falls, gives an account of an experiment made with one hundred hogs, averaging two hundred lbs. each, and placed in nine large covered pens, with plank floors and troughs. They were fed as follows:—

"The corn was ground up, cob and all, in one of the "Little Giant" steam mills; steamed and fed at 6 and 9 A. M., 12 M., 3 and 6 P. M., or five times a day, all they could eat, and in exactly one week they were weighed again, the corn they had eaten having been weighed also, and calling 70 lbs. a bushel of corn, and pork as before, 4c. (gross,) it was equal to 80c. per bushel for corn. The weather was quite warm here for the season of the year. The first week in November I tried the same experiment on the same lot of hogs, and the corn only brought 62 cts. per bushel, the weather being colder. The third week, same month, with same lot of hogs, corn brought 40 cts., and the weather still getting colder. The fourth week same as above, corn brought 26 cts.; weather still colder."

This lot of hogs were sold off the last of November and another lot of hogs put up, which had been fed in the field on corn in the cob.

"This lot was weighed and fed as above, the five weeks of December, and the corn fed averaged 26 cts. a bushel, the weather being about the same as the last. This lot was tried again in the middle of January, the corn fed for that week averaging only 5 cts. per bushel; at that time the thermometer stood at zero. This same lot was tried again and just held their own, the thermometer being below below zero, sometimes as low as 10 degrees."

From these facts the writer comes to the sound conclusion that "it will not pay as a general thing to feed corn to hogs after the middle of November," unless the price is very low. It will not pay to find fuel in the shape of corn, to keep hogs or other stock warm in winter. We should either fatten early, or provide comfortable shelter and accommodations for our swine, &c."

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[For the Country Gentleman and Cultivator.]

SOUR FOOD FOR FATTENING ANIMALS.

R. L. Pell, before the American Institute, said that "sour feed fattens animals more rapidly than sweet"—that "green herbage of all kinds, collected and allowed to get sour in water, will fatten pigs that would not thrive on it before"—that "brewer's grains, when sour, will fatten cows and other animals more rapidly than when sweet." If this theory is true, the great grain distillers of the cities, instead of throwing away so much of their slops, might condense them by boiling until the excess of water had steamed away and the slop was made profitably portable, so that it could be fed to cattle and hogs in the country. We should then hear no more complaint of diseased cows and poisonous swill milk at the city distilleries. Milk made from such slop with rations of hay, straw, or roots to the cow, (to compensate for the loss of starch in the slop from distillation,) would be much richer than farm milk generally.

Mr. Pell tells us of a man who boasted that he never watered his milk to sell in the city, but he took care to feed his cows on succulent food that contained more than 80 per cent. water; the result was, his milk had no better reputation than watered milk. S. W.

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[For the Country Gentleman and Cultivator].

Chester County Hogs.

Friend Tucker & Son—Seeing in your Co. Gentleman an account of Chester County hogs, permit me to add my experience. I received last fall from Chester county, Pa., a pair of the above—September pigs. In July last I had a litter of three pairs, and a fair prospect of another in January next, which to me shows they will be prolific. They are white, short legs, with thick, heavy bodies, and seem peculiarly calculated to fatten at an early age. Unlike the Suffolks, they have sufficient covering to shield them from cold or heat. And with their little heads and short noses, I say to farmers try them, and see if we cannot make them weigh 500 lbs. at 18 months old.

West Winsted, Conn., Oct. 16. Judson Wadsworth.

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Hemlock for Grain-Bins.—H. Poor of Brooklyn, L. I., says in the *New-England Farmer*, that grain-bins built of hemlock, are positive proof against the depredations of rats and mice, as they will not gnaw it.

PREPARING FOR WINTER.

"Chill November's surly blast makes fields and forests bare, and old Winter with his frosty beard," will soon be upon us; and in the northern and western states, winter is not a myth, but a substantial reality that can neither be hushed up, coughed down, or thrust aside. There is no shirking its cold and driving storms. It is a palpable thing—one that can be felt by both man and animals; and it is the part of wisdom, in the farmer and all others, to be prepared to meet it, and as far as possible to guard against its severity upon the inmates of the barn as well as of those of the house.

The dwelling-house should be well banked up if necessary, so as to prevent the cold from entering the cellar and frosting the potatoes and other vegetables stored therein. From neglect in making their cellars frost-proof, we have known many farmers to lose large quantities of potatoes in their cellars, by freezing, and in the following spring they were obliged to purchase, (and sometimes at a high price too,) potatoes for planting and for table use. A few hours of well directed labor early in November, in fixing up their cellars, would have saved their potatoes, money, and whining.

Broken windows should be attended to; glass and putty are cheap, to what they were half a century ago, and there is no longer any excuse for filling the broken windows with old hats, cast off undergarments and unmentionables, as was so frequently the case in the "good old times" we occasionally hear of. Everything connected with the house should be made snug and comfortable, both inside and out. The principal living-room should be upon the sunny side of the house, and be furnished with good sized windows. The burrowing of families in ill-lighted rooms, in the cold, dark, north side of the house, where the sun scarcely peers in upon the inmates from November to April, is poor economy indeed, and still poorer, to stint the children, who wish to read or study, to the feeble light of a small sized, greasy, tallow candle. Good oils of various kinds, for illuminating purposes, with lamps to match, are now everywhere obtainable, and at prices within the reach of all. But abjure camphene and other burning fluids, as you would the fangs of the deadly serpent. Furnish the sons and daughters of the farmers with suitable books, agricultural and other papers and periodicals, and good lights and pleasant rooms, and we should hear less of their fleeing from the paternal roof, and the leaving of "the old folks at home," in their downhill of life.

Over large sections of the country, the frosts of a few of the last nights of September found much corn unripe. It has dried somewhat, and much of it appears tolerably sound, but yet the cob contains a large amount of water. Where the corn is stored in cribs, or in latticed corn houses, there is danger of its becoming mouldy, and sometimes the corn is very much injured by having the cob frozen. This was the case with tens of thousands of bushels of corn in the western states, in the autumn of 1857. The corn was harvested and cribbed as usual, and near the close of November of that year, a few days of extreme cold occurred which froze the juicy cobs, and when the weather became mild enough to thaw, most of the corn was found to be nearly worthless, becoming slimy and useless except for the compost heap. In the latticed corn-house a close box stove can be profitably used for *kiln drying* the corn, an experiment we have known to be successfully tried on several occasions. Where the corn is spread upon the garret floor it should be daily raked over, and in fair weather the windows should be kept open for the purpose of keeping up a free circulation of air, which will much hasten the process of drying, and prevent mouldiness.

A few days since we saw some newly harvested corn, which had been thinly spread upon a garret floor. The owner thought when harvested, that it was well ripened and dry, but upon examination a few days afterwards, the underside of a large portion of the ears was mouldy. Such corn will not make good sweet bread, nor do well for seed. The raising of the windows, and daily use of the rake in moving it about, arrested all farther mouldiness. This is a matter worth attending to, as is also that of picking over and assorting the potatoes stored in the cellar, if there is much appearance of rot.

The good economy of carting out manure, and depositing it in conical or ridge like heaps, in the autumn, near where wanted for next season's crops, is well understood by all who have practiced it. If there is danger of the heaps freezing badly, and not thawing in the spring as soon as wanted, a good covering of brakes, leaves, or something of the kind, and this covered with large bows of evergreens, will prevent freezing, and the process of decomposition will in a greater or less degree be carried on during the winter months. Where the manure is coarse, or not well rotted down, when carted out, a farther rotting process is desirable.

It is also good economy to plow during this month, clayey and other stiff soils. The furrow slices as left by the plow, are generally in a much better condition to be operated upon by the winter's frost, and atmospherical agencies, than if they were harrowed fine and then rolled. Corn and other stubble ground, intended for wheat, barley, or oats, the coming spring, according to the experience of some good farmers, should be well and deeply plowed in the fall. Such land needs only the cultivator and harrow to prepare it for sowing the grain, and the presumption is, a better crop of grain will be harvested than if the land was spring-plowed. Everything should be done in autumn that can be, towards spring's work. A scarcity of hay, and wet backward springs, sometimes puts the farmer so far in the back ground that he can scarcely "catch up" through the whole season—much of which might have been avoided by having a portion of his spring's work done in the previous autumn.

If not already attended to, the dark drizzly days of November afford the farmer a favorable time to repair and put in order his sleds, chains, axes, and handspikes, for getting up the year's supply of fire-wood, timber, mill-logs, &c. Where the wood and timber lot is not too rough and broken, it is much the better way to have the sledding done in early winter. Eight to twelve inches of snow frequently affords good sledding to the wood lot, and if the sled-shoe does occasionally get a severe grazing on the uncovered rocks, it is no killing affair--it is better to shoe sleds than to break paths through three feet snows, and crowd the team over or through five feet snowdrifts.

Most farmers are now aware of the important fact, that warmth and shelter for farm stock, to a certain extent, is equivalent to an extra amount of food, or in other words, cattle, &c., kept in good, warm, well ventilated hovels, stables, sheds, &c., require a much less amount of food to keep up or increase their growth, than the same stock would if exposed to the out-door cold and storms of our northern and western winters for months together, as is too often the improvident and cruel practice of farmers in some sections of our country. Where large numbers of horses and cattle are kept in the same stable or hovel, there may be some danger of having the hovels too close and warm for the health of the stock; but if a proper system of ventilation is attended to, governed somewhat by the temperature of the weather—whether very cold or moderate, or quite warm—little fear need there be of having the hovels too warm. In very cold weather but little fresh air is needed, in addition to that which will force its way into the hovel through the "cracks and crevices;" in milder weather more air should be admitted; in warm weather the doors and windows should be kept open. To manage these matters aright, requires attention and judgment on the part of those having charge of the farm work during winter. Farmers differ somewhat in their views as to the winter management of sheep and young cattle. Some prefer keeping their sheep mostly in the barn, where they have suitable feeding racks; others give their flocks the choice of sleeping in the barn or out-doors. For the best health of the sheep, whether they lodge outdoors or under cover, they should be well littered with straw, refuse hay, or dry leaves. Some farmers of late years "tie up" all their cattle, old and young, giving them the range of the barn-yard for an hour or two each day through the winter, if not too cold or stormy. It is thought by such farmers that their cattle do better and require less hay than if allowed their liberty to range far and near. Others think that young cattle do better to have their liberty in the yard, or under sheds, or the barn cellar, and fed from suitable boxes or racks. These are matters about which farmers will decide for themselves. In the meantime we will suggest that from this to first of December, will be a good time to make all needful arrangements for the most economical method of keeping them through the winter in a thrifty, growing condition. There is no profit in stinting farm stock in their rations, or the laws of animal life cannot be violated with impunity.

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[For the Country Gentleman and Cultivator.]

CULTURE OF THE CARROT.

Messrs. Tucker & Son—I notice in number 14, Oct. 4, of Co. Gent., an inquiry in regard to the cultivation of carrots, and an invitation to growers to give their mode of management, &c. As I have raised them to some extent the past few years with tolerably good success, I will give you my views and mode of operation; but I do not expect to throw much light on the subject, being comparatively a "young farmer."

In the first place, I prefer a clay loam for carrots, although some prefer sandy loam. It is absolutely necessary that the land be plowed deep, say 12 inches, or what is better, *subsoiled*, and well manured in the fall. In the following spring take the two-horse cultivator and run it both ways. This, after having laid all winter to the action of frost, rains, &c., will render the soil perfectly loose and mellow, and incorporate the manure with the soil more thoroughly than when applied in the spring. I then give a light top-dressing of fine well decomposed manure, and drag it in with a small fine toothed harrow, or in the absence of that implement take a garden or hand hay rake, as it is essentially necessary to have a fine tilth and smooth surface to sow the seed on, if we would expect to have it germinate well. I then take a marker made to mark the rows 20 inches apart, so as to admit of cultivation by horse power.

I have always used the "Albany Seed Planter or Drill Barrow." It is easily adjusted to sowing and planting all kinds of seeds. I sow from two to four pounds of seed to an acre. I find it best to use plenty of seed to ensure a good "catch."

I have strong faith in the top-dressing, as it feeds and nourishes the young plants until the roots take up the manure from below.

The weeding is done by first going through with the horse hoe or weeder, passing it as near the plants as possible without interfering with them. I then take a hoe with good sharp corners, and go first on one side of the row and then on the other, drawing the hoe in an obliquely direction from the plants, taking away part of them, with all the weeds, which greatly facilitates the operation of thinning by hand. In thinning I leave the plants four inches apart, best as a rule, but vary the distance either in or over, if by so doing I can leave a stronger plant. It is quite an object to leave the strongest and healthiest plants.

All we have to do now with regard to the cultivation, is to keep the soil well stirred and free from weeds, except in a very dry time, when it may be necessary to water them. I use liquid manure freely; but when land is well subsoiled, and kept loose and mellow, it takes a severe drouth to effect them much. G. Fairbairn. *Erie Co., N. Y.*

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[For the Country Gentleman and Cultivator.]

A GOOD COW

L. Tucker & Son.—Having read the account of the Ayrshire prize milkers, and also of L. Sweetser's Ayrshire cow, which gave 300 pounds of milk in seven days, I will give you an account of a cow owned by me, as L. Sweetser says by way of comparison. I would like to know the number of pounds of butter she made in the seven days. I did not weigh the milk every milking, not expecting to publish it, but weighed at different times through the week. I will give the average weight when weighed, and likewise the amount of butter churned from her in seven days. She dropped her calf the 5th of 5th month, (May,) and at one week old it was taken off for raising. She was then fed with eight quarts of corn meal chopped with the cob, adding one-third oats before chopping, with plenty of good hay. Her average weight of milk when weighed per day, 48½ lbs., which would amount to 339½ lbs. in seven days. Churned from it 15 lbs. of excellent butter.

When turned out to pasture she increased one quart per day, which was the 20th of 5th month. She milked very extraordinarily through the summer, and now, after milking twenty-two weeks, in the last seven days we have churned from her milk alone 12 lbs. 13½ oz. of beautiful yellow butter.

She is of the red Durham stock, three-quarter blood, and weighed before calving, 1,370 lbs.

I send this account as true, at the same time knowing there are many that will not credit such accounts because such cows are scarce. I have kept a dairy for many years, and have now some good milkers, but never owned such a cow as the above. The butter was weighed in the presence of several neighbors. John C. Lester.

Quakertown, Pa., 10th mo. 15, 1860.

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Bed Bugs and Cockroaches.

In one of the late numbers of your valuable paper, I noticed an appeal from a neat housekeeper, for aid in her war against bed-bugs. I sympathize too sincerely with her sufferings not to hope that the remedy, a very simple one, which has been entirely successful in many cases within my knowledge, may be of use to her.

Procure from an apothecary, half a pound of dried calamus root, boil it in two quarts of vinegar, and leave it to steep all night. With this decoction thoroughly wash the bedsteads. I have never known this remedy to fail in cleansing the bedsteads, but if there is any reason to fear that the insects have made their way behind the papers of the rooms, as is sometimes the case where they exist in great numbers in an old house, I believe they can only be exterminated by tearing down the papers, and either white-washing or painting the walls, according to choice. D. C. B. *Winchester, Mass.*

[For the Country Gentleman and Cultivator.]

Characteristics of "Fife" Spring Wheat.

This variety of wheat has been grown extensively the last three seasons in the west and northwest, and proves to be so valuable, that I think every wheat cultivator in the United States is, or may be, interested in knowing something more about its habits and qualities, than has yet come under the public notice; at least, so far as I am aware, from considerable agricultural reading. Though to some, its name might so imply, this wheat is *not* of Scotch origin—does not get its name from the county of Fife, but from the name of its originator, Mr. David Fife of Ontonabee, C. W., who saved a few roots of a *winter* variety that he obtained from Dantzic, via Scotland, I believe, and subsequently cultivated the produce as a *spring* wheat.[*] I will say—after thirty years experience in wheat culture—that I have seen no variety of spring wheat that contained so many useful qualities, and therefore so widely adaptable, as the Canada Fife in Wisconsin. It is very hardy, and therefore less liable to rust or mildew and other diseases than other known varieties. It is later than Canada Club, and does *not* ripen off so *rapidly;* it therefore is more conveniently and economically harvested, particularly as it has the great advantage of shelling or beating out with difficulty; the crop, even when dead ripe, being *comparativelg* free from loss, therefore, in cradling, reaping, or other harvesting routine. It grows a few inches taller than Club; about as stiff, which is quite strong in the straw, and consequently stands up well, not lodging except in very rich situations.

This Fife wheat threshes easy *enough*, and is much less *cut* or *broken* by the horse machines than Club and Rio Grande. Indeed, my Fife was not broken in threshing, while the Club was, to a considerable extent; and the Rio Grande, in my vicinity, more so it seems. This shows the berry of the Fife to be comparatively and literally compact and very firm, or when dry, even hard, which I infer must give it better keeping or storing qualities than those of more tender varieties.

A year or two ago, before it was generally known, and when, therefore, its merits were not well understood, its broad and hardy qualities led the millers to look well to their grinding apparatus, as they found it required edge and grit, and more than common power to flour it *well.* Hence they gave it a gritty reputation. But Club failed so fast the last few years on the Wisconsin prairies (which by the by, are to within two miles of my house, as fine as any in the U. S.) that Fife rapidly superceded it; so that now there are probably three acres of Fife to one of Club raised. Now, therefore, the Fife variety is well known, particularly in this State and adjacent wheat districts. Its quality, though not changed, is now much better appreciated. Instead of there being more grit in it than in the long known Club, it now turns out that its flour is *equally* good as the flour of Club itself, in which it approaches therefore, to within twenty-five or thirty per cent. per barrel, in quality and value to the flour of winter wheat. Our better informed producers, now, therefore, sell Fife and Club at the same prices, and these usually rate only five or six cents per bushel less than winter wheat commands, or rather formerly sold for; I say *formerly*, for I have *not* seen a field of winter wheat this year.

I know of many instances, too, in which Fife has yielded three to five bushels per acre *more* than Club, both this season and last. In all this I am saying nothing in depreciation of the good old Club, where this has shown in symptoms of decline. But in Wisconsin, Club has extensively exhibited a declining tendency in a variety of particulars, which, as they may not have befallen it elsewhere, I need not detail.

On the whole, Fife wheat—in consistency with its recent origin from a fall variety—comes so near in hardiness, productiveness, and other economical qualities to winter wheat, that in localities where the latter is precarious or uncertain, in any considerable degree, I should prefer to replace it with spring Fife; the difference in the value of produce being much less, in such circumstances, than the anxieties and losses incident to a precarious crop. Last year the Fife with me yielded 26 bushels per acre; this year thirty-six. This year is not a criterion, however, the season having been so unusually good *for wheat.* But I have no doubt I can make the Fife yield twenty-four or five bushels per acre one year with another, and I need therefore say no more in recommendation of a sort so evidently *nearly* right. J. W. Clarke.

Marquette, Wis., Oct. 16.

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[*] This account of the origin of the Fife wheat does not agree with a statement published in the Co. Gent., vol. 18, p. 237, by Mr. George Esson, a neighbor of Mr. Fife's at Otonabee. Mr. Esson says:

"About the year 1842, Mr. David Fife, of Otonabee, C. W., procured through a friend in Glasgow, Scotland, a quantity of wheat which had been obtained from a cargo direct from Dantzic. As it came to hand just before spring seed time, and not knowing whether it was a fall or spring variety, Mr. Fife concluded to sow a part of it that spring, and wait for the result. It proved to be fall wheat, as it never ripened, except three ears, which grew apparently from a single grain; these were preserved, and although sowed the next year under very unfavorable circumstances, being quite late, and in a shady place, it proved at harvest to be entirely free from rust, when all other wheat in the neighborhood was badly rusted. The produce of this was carefully preserved, and from it sprung the variety of wheat known over Canada and the Northern States, by the different names of Fife, Scotch and Glasgow. As the facts occured in my immediate neighborhood, and being intimately acquainted not only with the introducer, but with the circumstances, I can vouch for the correctness of the statements, and if necessary produce incontestible proof."

[For the Country Gentleman and Cultivator.]

Use of Machinery—Cows for Draft.

Editors of Co. Gent.—I have recently noticed an inquiry of Mr. Carver, as to steam power for thrashing, sawing wood, and cutting feed, asking those who use machinery to state through the Country Gentleman whether it will pay. I will say to him that for the last ten years I have used my cows for sawing all my fire-wood, cutting hay, straw and stalks, and considerable thrashing, and believe it altogether the cheapest and most convenient power in the reach of most farmers.

For the past three years I have used Whitman's Straw Cutter, Emery's Sawing Machine, and Emery's two horse Railway power. I have not paid the first cent to keep the whole in perfect running order since I purchased them. Such machinery I think will pay.

For the past fifteen years I have had two or three pairs of cows broke to the yoke, which are always ready to help along when we want more team. They haul out most of my manure, and do most of the carting. With some additional feed when at work, I believe they give as much milk as if not worked. This I think does very well.

I should very much like to see in the Co. Gentleman, the opinion of some practical and experienced feeder as to the comparative expense and utility of steaming feed—what kind of apparatus used, the cost, &c. I have steamed cut hay, straw and stalks, with meal—used a large covered box. I have concluded it would not pay, and abandoned it. Lewis Bailey. *Fairfax Co. Va., Oct.* 16.

[For the Country Gentleman and Cultivator.]

Woodpeckers in the Cornfield.

My cornfields were much infested during the past summer by the corn-worm, (*Heliothes*,) and I had begun to fear that great damage would be done by it, when succor appeared in an unexpected form. Large numbers of Woodpeckers came down upon the fields, and commenced a war of extermination upon the worms. Where the insect had penetrated so far that it could not be reached from the opening itself had made at the summit of the ear, the Woodpecker quickly drilled a hole farther down and pulled it out. Bushels of corn, I doubt not, were saved by these birds in my fields alone. "Honor to whom honor is due." D. H. J. *Vinely, S. C.*

Wintering Horses.—A Connecticut farmer winters his horses on cut hay and carrots. In the morning each horse receives six or eight quarts of carrots, with half a bushel of cut hay; at night he has the same quantity of hay mixed with three quarts of provender, consisting of oats and corn in the ear ground together. This keeps them in fine health and good working order.

The Entomologist.

[For the Country Gentleman and Cultivator.]

No. 24.—THE PEAR BLIGHT BEETLE.

A gentleman in Southampton Co., Va., sends to the Co. GENT. some wood of an apple tree containing several beetles, which he says have destroyed some of the trees in his orchard, which were growing thriftily previous to their invasion by this insect. He desires some information respecting this insect, and how to avoid its ravages.

The insect is the Pear blight beetle, which is known to work in the apple, plum and apricot, as well as in the pear. It is very important that every fruit grower should be able to recognize this insect, and I therefore present such a description of it as will serve to distinguish it from other insects found in the same situations. It is so small that a magnifying glass will be required to clearly perceive some of the particulars stated in this description.

The Pear blight beetle is of a short cylindrical form, twice as long as broad, and bluntly rounded at each end. On placing one and another of them upon a graduated scale they are found to be slightly over the tenth of an inch in length, and the smallest ones exactly of that size. A little forward of the middle they are cut asunder by a transverse suture, conspicuously dividing the body into two parts, the fore-body or thorax and the hind-body or abdomen, over which last the wing covers are closely laid. The head is small and sunk into a round opening on the under side of the fore-body. The forward end is very rough and rasp-like from little projecting points, and the wing covers are glossy, and have numerous small punctures arranged in rows. The body is bearded at each end and along the sides, with short, silvery, yellowish hairs. The color of these beetles is black or very dark chestnut brown, the wing covers being often of the latter color, with the fore-body pure black. The antennæ and legs are paler, of a testaceous color, (the hue of a tortoise shell comb,) with the thighs much darker or almost black.

This insect belongs to the group of Bark beetles, (*Scolytidæ*,) which are often noticed under the bark of pine and other trees, where they excavate long slender burrows, which are often so regular as to resemble marks drawn with a pencil. And to come out from the tree, they bore through the bark, forming numerous holes therein like the perforations of a pin. The species now under consideration was first brought to notice by Prof. Peck, who gave it the scientific name *Scolytus Pyri*. Dr. Harris subsequently referred it to the genus *Tomicus*, but as the little round knob at the end of its antennæ is solid, and not cut asunder into four joints, it certainly pertains to the genus *Scolytus*, in which Prof. Peck originally placed it.

This insect has never occurred in my own neighborhood to afford me an opportunity to examine its operations. I consequently am only acquainted with it from information and specimens received from correspondents, and from published accounts. These latter speak of it only as infesting the young twigs. In the middle of summer, when the tree is in full leaf, a twig here and there is seen to be withered and its leaves faded and dead. On inspecting these twigs a small perforation like a pin hole is seen at several of the buds which project at different points along the bark. And from each of these holes a burrow may be traced, on splitting the twig, extending up a short distance in the central pith, with one of these beetles therein. I presume that the female places an egg in the axil of one and another of the buds, and that the larvæ, which is a small white grub which hatches from the egg, gnaws its way from thence inward to the pith, on which it afterwards feeds until it matures and changes into the beetle, which continues to occupy the same cell until it is ready to come abroad and select its mate and deposit another crop of eggs.

But in addition to its working in this manner in the wigs at the ends of the limbs, it also infests the trunks of the trees. Four years since, I received from L. Smith, Esq., of Middlefield, Mass., some apple wood with insects therein, which had destroyed several thrifty young trees in his grounds. These insects proved to be the Pear blight beetle and a kindred species much smaller than this, which I described in my Third Report on the Noxious Insects of New-York. And as it was in the spring of the year that Mr. Smith met with these insects in his trees, I inferred there were two generations of this species annually, the first one in spring, cradled in the trunks of the trees, and the second in midsummer, attacking the tender twigs which have then put forth. But it now appears, from these Virginian specimens, that this beetle is found in the trunks of the trees at the close of summer, as well as in the spring. It is not worth while to speculate upon this subject, since the full history and habits of this insect, and the circumstances which cause it to locate sometimes in the twigs and sometimes in the body of the tree, can be authentically ascertained only by actual observations made where it is at work in its natural haunts.

When this depredator makes its appearance in the twigs of the trees it is an easy matter to subdue it. The blighted twigs are readily detected by their withered leaves appearing as they do when all the rest of the tree is clothed in its summer verdure. And such twigs should be immediately cut off and consigned to the fire to destroy the enemy that is lurking within them. But where any of these Bark beetles make their lodgment in the trunk of the tree we as yet are unacquainted with any remedy for arresting their career. In Europe extensive forests have sometimes been destroyed by some of the insects of this group, there being no known means for withstanding them. After a tree is dead they continue to breed and multiply in it until the wood is so far decayed that it ceases to be palatable and nutritious to them. Hence it is advisable to cut down and burn all dead trees, and also all that are declining and unable to survive—lest from the successive broods that will be nurtured in such trees, some individual may wander abroad and found new colonies in any trees that may yet remain uninfested.

Whether by washing the trunks of uninfested trees with alkaline solutions, tobacco water, or any other substance, the bark may be rendered so unpalatable to these insects as to protect them against their invasion, can only be ascertained by experiments which are yet to be made.

East Greenwich, Washington Co., N. Y. ASA FITCH.

NOTE.—A few weeks since, we received from "P." of Franklin Depot, Va., specimens of a caterpillar which was there preying upon the foliage of the Silver-leaved maples. As no leaves were placed in the box for them to feed upon during their journey hither, they came to hand dead and very gaunt and shriveled. They, however, appeared to be a species unlike anything we have ever met with upon the maples here, and which we are, consequently, unable to name without seeing the same insect in its perfect state, when it will be a miller or moth.

CULTIVATING AND PRUNING HEDGES.

During a recent journey in several directions, through some of the western states, as well as of our own State, we had some opportunity of witnessing the results of attempts at hedging. They have mostly proved failures. In this state, perhaps not one attempt in a hundred has given a good reliable barrier—in the west success has been more frequent—the soil being perhaps more fertile there, and the longer or warmer summers favoring a larger growth. We speak solely of the Osage Orange for this purpose.

So far as we have witnessed, the failures have arisen from the entire neglect of the two absolutely essential requisites, namely, *cultivation* and *pruning*. To omit either is fatal. The speculator who offered for sale an excellent mill-seat, with only one defect, namely, entire absence of water to drive the stones, made a less mistake than the hedgers, for he left out but one requisite, while they omit two.

The privet and buckthorn, which have much natural *hedginess* about them, will form some semblance of a wall of verdure, with neglect; but the Osage plant, which is better than either, although having naturally none of the peculiar dense growth required, can be nothing at all without cutting, and will not grow without culture.

We have examined a great many intended hedges several years old, the appearance of which is so nearly alike in every case, that the annexed cut, (fig. 1,) is a tolerably accurate representation of all. Most of the plants were either partly dead when set out, were badly transplanted, or else were destroyed by the dense growth of weeds and grass. Many hedges, (so called,) are much thinner than the cut indicates, eight or ten feet in length often occurring entirely destitute of plants.

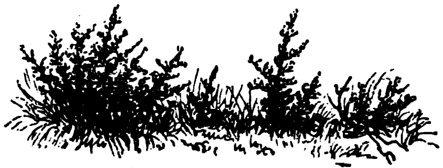

Fig. 1. Hedges a "humbug."

In a few instances the hedge has been partly cultivated, or rather the owner claims that it has been; and the cutting back has been done at the top only, and not at the bottom. Such a hedge appears better than the preceding, or like fig. 2, the end view of which is something like fig. 3.

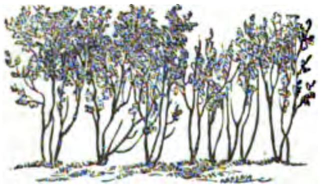

Fig. 2.

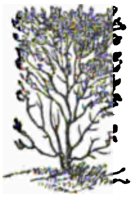

Fig. 3.

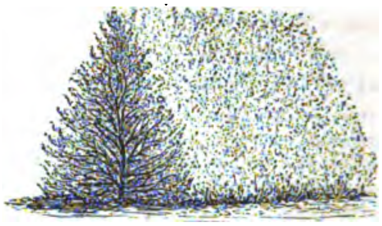

Fig. 4. Hedge a Success.

Fig. 4 exhibits a hedge which has been properly managed. In the first place the soil has been well prepared, (and thoroughly underdrained—nearly under the line of the hedge before setting, unless there is good natural drainage,) the plants carefully selected, after the buds are swollen, so that all bad ones may be rejected; a broad, (not a narrow,) strip of land kept well cultivated on each side for several of the first years; and in a year or two, or after the plants have become thoroughly established and vigorous, they are cut down nearly even with the ground, and again a few inches higher, and so on, so as to make a wide thick base, like fig. 4. Some such hedges as this, of five years growth, and seven feet high, were special objects of admiration, and among them we may name the beautiful hedge surrounding a part of the nursery of M. B. Bateham & Co., of Columbus, Ohio.

To preserve the hedge in the best condition, it should not be sheared very frequently. By doing so, the interior becomes a smooth, impenetrable sheet or stratum of foliage, shutting out the light from the interior, which consequently becomes destitute of leaves, or only naked and partly dead stems and branches, fig. 5. If less evenly sheared, the light enters the exterior, and the foliage and healthy shoots are nearly uniform throughout, fig. 6. Ordinary shearing will produce an effect between the two if not too often repeated, or like fig. 4.

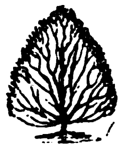

Fig. 5.

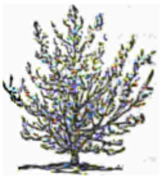

Fig. 6.

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[For the Country Gentleman and Cultivator.]

THE PUMPKIN-SEED QUESTION.

Messrs. Editors—A few years ago this question was discussed, experiments tried, and I think their results were given in the Country Gentleman; at any rate the seeds were condemned. About that time I was feeding pumpkins to milch cows in the usual way, and was disappointed in the quantity of milk produced. My milk is drawn into seven-quart bottles, morning and night, and a minute made of the amount every day. If there is an increase, or the reverse, it is seen at once, and the reasons are known. But being "no doctor," an explanation of the reasons cannot always be given, as in the case of the *Pumpkin Seeds.*

At the time referred to, I had a box placed near the manger to receive the seeds, that I might know that they were taken out. My experiments at that time satisfied me, first, that the seeds were injurious, inasmuch as they diminished the flow of milk; and second, that pumpkins fed, either with or without the seed, to milch cows, did not lay on their equivalent in fat, but when fed to fattening animals, are a valuable article of food. Since that time I have seldom fed pumpkins to milch cows.

This year, as usual, I gave directions to feed pumpkins and squashes to the oxen, but the man having charge of the cows failed to understand the direction, and fed "seeds and all." A few mornings ago he came in, saying that two or three of the cows appeared sick, their hair standing on end, and there was a falling off of their milk, notwithstanding he had been feeding better. I suspected the cause, and applied the remedy—by cutting off the pumpkins—and now all is well, and my "judgment not reversed." M. C. W. *Lincoln, Mass.*

[For the Country Gentleman and Cultivator.]

Experiments with Superphosphate of Lime and other Manures for Corn.

Messrs. Eds.—In September, 1859, while rambling over the intervale farm of Jos. B. Walker, Esq., of Concord, N. H., he called my attention to a few rows of corn on the south end of a field of two or three acres. In manuring the field he lacked about one load of manure to finish out the piece. On this unmanured portion, he planted two rows of corn without any manure; two rows with Peruvian guano in the hill; two rows with plaster of Paris in the hill, and two rows with Coe's superphosphate of lime. The six first named rows were very poor indeed, while the rows having the superphosphate would average nearly as good as the corn on the portion of the field that was heavily manured in the spring. We were of the opinion that the two phosphated rows would yield as much corn as would the other six. I suggested to him the propriety of accurately ascertaining the result when he harvested the corn. This he did, and found the corn on the two phosphated rows equal to that of the other six. However, this experiment was on too small a scale to be of much practical value; but it induced him to experiment more largely and carefully the past season.

I was at his place during the last week of September, and carefully noted the results of his experiments on his corn crops with different manures. The first piece, some two or three acres of inverted sod intervale land, was well manured with a compost of muck and cattle manure. About one half of the field was manured in the hill with Coe's superphosphate of lime, at the rate of 125 lbs. per acre. Stakes were put down to mark the row where the superphosphate ended; but as the result proved, this was unnecessary, as the superior size and more early maturing of the corn made its own mark—it being very much the best, ripening in 120 days from the time of planting; while the corn on the same field, manured as above except the superphosphate, was ten days later, and much smaller all through the season.

Field No. 2, well manured with stable and hovel manure, superphosphate applied to part of the field, as in No. 1—attended with similar results, except in the ripening of the corn, which was later by two weeks, it being a larger and later variety of corn.

Field No. 3, just one acre. This land having been annually pastured (although intervale) for over 120 years, and never manured except by the droppings of the cows and the sedimentary matters left by freshets. The land being free from obstructions, was well plowed in October, 1859, well harrowed in the spring, and divided into three equal portions of one-third of an acre each, and manured as follows:

1.—One-third acre—Superphosphate, at the rate of 225 lbs. per acre, at a cost of $5.40 per acre. At the second hoeing, a handful of unleached ashes was applied to each hill on the three plots alike.

2.—One-third acre—Guano, large tablespoonful to a hill; cost at the rate of $60 per ton.

3.—One-third acre—Pigeon and hen manure mixed with soil—two parts soil to one of bird dung; half pint in each hill.

Where the superphosphate was applied there was much good corn. The portion manured with the compost of bird manure was very much poorer, and that part guanoed was miserable in the extreme; a very large portion of it was cut up for fodder, there not being even a nubbin on the greater portion of it.

In rating the difference, we put the proportions thus: superphosphate 4, hen manure compost 2, guano 1. That is, the superphosphate produced twice as much corn as the compost, and four times as much as the guano.

Reasoning from chemical principles, we should at once say, without experimenting, that superphosphate of lime was the "one thing needful" for the improvement of land that had been pastured by milch cows for over 120 years in succession. The application of superposphate of lime, or fine bone dust, to the long grazed pastures in Cheshire and other districts in England, has been attended with the most successful results. The reason *why*, is so self evident, "that a child might understand."

Mr. Walker kindly furnished me with his written views upon the results of his use of superphosphate upon the corn crops on his farm, which I here copy:

"*First.*—It affords *immediate* support to the plant in its tender state, before its roots expand sufficiently and reach the other manure, and keeps it growing vigorously during the first period of its growth, (say the first month,) until fairly started; it then begins to appropriate the other manure—or in common farmer parlance "it gives it a good start," and that too when it needs it most, and there is a greater evenness in the size of the plants.

"*Second.*—The "start" thus given is kept up through the season, and the corn ripens from ten to fourteen days earlier than it otherwise would.

"*Third.*—It increases the length and fairness of the ears, and there are fewer nubbins and soft ears."

From a careful examination of the several fields of corn above described, I think Mr. W.'s views are perfectly correct as to the action of superphosphate of lime upon his long cultivated soil, and the corn crop. But it would be unreasonable to suppose the same marked results would follow the increase of the corn crop upon "every body's else" cornfields. There are so many contingencies connected with the action of concentrated manures upon different soils and crops, that the "profit or loss" of purchasing them can only be ascertained by carefully conducted experiments—and those at first should be upon a small scale. It may be profitable for the New-Hampshire farmer, as in Mr. Walker's case, to purchase or manufacture superphosphate to apply upon his long cultivated and grazed alluvial and other soils. But it might prove the very reverse of "profitable" for the Wisconsin or Iowa farmer to purchase either guano or superphosphate. His new soils already contain every constituent of fertility requisite to the production of maximum crops of corn. But if they did not, and it was ascertained that superphosphate would exhibit the same good results as in Mr. Walker's experiment, then it might not prove a profitable investment of money to purchase superphosphate, as the price of corn there would not cover the cost of the superphosphate. In the purchase and experimenting with purchased manures, whether domestic or foreign, all these things should be taken into consideration by the farmer—and when he finds he is right "let him go ahead."

Warner, N. H., Oct. 23, 1860. Levi Bartlett.

Remedy for Smut in Wheat.

Messrs. L. Tucker & Son—I see an inquiry in the Sept. Cultivator, concerning smut in wheat. Below I give you a receipt for cleaning seed wheat of that pest, which has proved successful in this county.

Receipt.—To the first bushel of seed take three tablespoonfuls of blue vitriol, and soak three hours; then pour off the brine, and dry the seed with lime. Keep the brine, and to every bushel of seed add one spoonful of the vitriol, and wash and skim as before, except the three hours soaking, and I think Tyro will soon be clear of smut in his wheat. L. Odell. *Randolph county, N. C.*

[For the Country Gentleman and Cultivator.]

Hints on the Care of Bees in Autumn and Winter.

As the past season has been an unpropitious one for gathering honey, it behooves the bee-keeper to look well to his stock of bees, and make a special examination of each swarm to ascertain definitely if any of the hives contain less than twenty pounds of honey; and should any such be found, the swarm will need to be fed either with honey alone or mixed with sugar diluted to the consistence of honey, poured on to pieces of empty comb, and placed in the hive in such a manner that Bees from other hives will not find it. Perhaps the best method is to introduce the feed into the boxes directly over the bees; but should it be a common box hive, it may be placed on the top of the hive where there is a communication through the top, and placing a cap over the whole; and then gently rapping on the top of the hive, the bees will press up through and find the feed. The feeding should be done during warm weather.

Another precaution to be observed is to guard against robbing, which can be accomplished effectually by contracting or limiting ingress to so small an entrance that bees within will be able to hinder intruders from entering, and should any stranger bees find their way into the hive, the occupants thereof will have them where they will deal summarily with them before the strangers can made their escape. Many good colonies are lost in this warfare, after the termination of the season for gathering honey.

Ventilation should also be attended to. Much has been written and many inquiries made on this subject, and Mr. Quinby, Oct. 4th, says that he regards *proper* ventilation as very important, and yet *proper* ventilation is very imperfectly understood. He also says: "Any way to get rid of the moisture." The presumption is that he would not freeze the bees at the outset as one of the ways, for that would surely prevent moisture, and if the modus operandi of some who give directions how to ventilate should be put in practice in very cold situations, the bees are just as surely frozen. Now what is the cause of this *moisture*, which proves so direful, when nothing except air enters the hive? The secret or theory is explained thus: When cool air comes in contact with warm surfaces, condensation takes place; hence the dews, and vice versa, when warm or rarified air comes in contact with cold bodies condensation takes place also, hence the moisture which appears upon the windows (in cases where they are not double) of a room, while the air within is rarified or warmed and the atmosphere cold without. The cold concentrates and dissolves the internal vapor and air, and the watery portions accumulate on the inner wall of the windows, and when the cold is very severe the water becomes frozen hence the opaque windows during the extreme cold of winter. In this manner sometimes large quantities of icy water is formed. The same occurs in bee-hives. The air which is respired by the bees, and that which comes in contact with them while clustered, is thus rarified and ascends like vapor through the openings in the top of the hive, unless the hive is provided with safety valves, in which case the *moisture*, as in the case of the window, accumulates on the internal walls of the hive, which has caused the destruction of more strong colonies of bees than any one other casualty, except the fatal way of some bee-keepers to get *rid* of the *moisture* by opening wide the apertures in the top and also in the bottom of the hive, and thus causing a currant of external air to pass up through the interior—precisely the method to cool a hive in hot weather—and also thus rendering the bees more exposed and liable to be frozen than they would situated on the exterior of the hive.

Perhaps the inquirer will now now ask, what is *proper* ventilation? Simply to give free vent for the air at the top of the hive, and not admitting any or but very little air through the bottom. Under all circumstances it is requisite to regulate the openings in the bottom with those in the top, which amounts to about the same thing without the drawbacks of inverting the hive—hence that custom.

If I were to answer the special inquiry of Apis, of Sept. 20th, I would advise him to place his fine swarm in a dark but not wet cellar, secure from frost, and remove one or more of the glasses from over the holes in the honey-board. Bees thus situated, will come out in the spring in the best possible condition that they can be expected to under any circumstances whatever. Small feeble swarms, that would not endure one-half of the winter if left on the stand, will, if placed in such a cellar, go safely through, and make fine swarms the ensuing summer.

In conclusion, I beg leave to request those who have the care of bees in a cold climate, to render them *proper* ventilation and protection also. C. J. Robinson. *Richford, N. Y.*

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The St. Lawrence County Fair.—We are glad to learn from the official report published in the Canton Courier and Journal, that, in spite of quite unfavorable weather, this exhibition proved successful, pecuniarily as well as otherwise. We quote:

> The exhibition as a whole was a decided success, notwithstanding the extreme cold and unpleasantness of the weather, and the receipts were greater than at any previous Fair of the Society. It was exceedingly gratifying to see so many persons remaining steadily upon the grounds through the storm, showing that they were no fair weather friends, but thoroughly interested in the Society. The officers desire to acknowledge their obligations to Mr. Lindsay, President of the Franklin County Agricultural Society, to Mr. Sigourney, Secretary of the Jefferson County Agricultural Society, and to officers of other Societies and Exhibitions for attendance, counsel and services during the Fair. The address was delivered by Luther H. Tucker, Esq., and was a plain, concise, and thoroughly practical production that held the whole audience close listeners to the end, despite the rain and even snow that came pelting down during its delivery. The show of cattle was beyond precedent, both in numbers and quality, being largely contributed to by exhibitors from other counties.

The Rensselaer County Exhibition—Mr. Allen's Address.—The Agricultural and Mechanical Exhibition which took place under the auspices of the Rensselaer County Society this year, was kept open for ten days, and we much regretted that other and previous engagements prevented our visiting the grounds. The following extract is from a private letter, which although dated Oct. 11, only reached us the 27th:—"*Gentlemen:* I regret I did not have the pleasure of seeing one of your firm at our Industrial Exhibition. The extent of our arrangements in buildings, roadways, &c., has not been equaled in this State, and the exhibition in manufactured articles has not been excelled in any fair or exhibition I have attended, unless it may have been that of the Crystal Palace. Our exhibition of stock was a fair one, and we had many visitors from abroad, who expressed their admiration of the internal arrangements of our three large permanent show buildings, which furnished space for showing articles to best advantage. At the request of the manufacturers no *premiums* were awarded to them, their object being to let the public examine for themselves."

The Address was delivered the last day, Sept. 28th, by Hon. Lewis F. Allen of Buffalo, and was devoted to the general subject of "Agriculture and its kindred interests." It forms an interesting and suggestive paper, alluding in conclusion to the improvements now within the reach of our farmers, and justly remarking "that to attain each for himself the highest degree of excellence in agricultural attainment, the best faculties of the mind must be devoted to its study, while the labor of the hand must be equally devoted to its practice."

Ashes for "Club-Feet" in Cabbages.—A correspondent of the New-England Farmer has succeeded in raising fine cabbages, on old garden soil, where for some time they have failed from "club-feet," by the use of wood-ashes. When setting the plants, half a pint of wood-ashes was placed in each hill, and immediately in contact with the roots of the plants. Every one succeeded.

SOME ITEMS IN MARYLAND FARMING.

"FREDERICK COUNTY, Md., extends across the State toward its West part. Area 560 sq. ms. The Potomac r. runs on its S. W. border. Drained by Monocacy r. and Cotoctin cr. and their branches. The Surface is gently undulating; Soil fertile. Capital, Frederick. There were in 1850, live stock valued at $913,855; wheat, 781,684 bush. produced; rye, 49,878; Ind. corn, 782,643; oats, 180,922; potatoes, 53,004: tobacco, 175,394 pounds; wool, 32,232;—72 flouring mills, &c."—GAZETTEER.

In the last number of the COUNTRY GENTLEMAN some facts and figures were promised with regard to the farms and farming of Frederick. The limestone lands of that County, particularly, may be classed, in the language of the Gazetteer, as "fertile." With a soil tolerably stiff, they pay for the extensive application of fertilizers, and, on the best farms, are sure to receive it. Differing from our Farmers in the system of labor employed, much larger capital is required at the outset, while at the same time one may be permitted to doubt if the current expenses of farming operations are really diminished in proportion. Consequently farming—to be successfully carried on—requires larger risks and even more constant and careful supervision than with us; and the fact that it is thus carried on with good success—and this in some departments, like dairying, that are particularly thought to require personal attention—is one to which we may therefore look with especial interest, both as affording encouragement to others similarly situated, and as perhaps not without its lessons of utility for ourselves.

One evening at the late Baltimore Show, as the proceedings at the Society's Meeting were mostly to be confined to the business transactions of the occasion, two or three of us held a private Discussion at Barnum's, in the course of which—being all chairmen and no audience—the system of direct interrogation was ruled in order, and the various details were elicited on which the above statements are founded. Avoiding the interruptions of the dialogue, we obtain from the conversation that ensued, something like the following outline of the farming of GEORGE R. DENNIS, who resides within a mile or two of Frederick City.

The Experience of Mr. Dennis.

Has a farm of about 300 acres, which has been in his possession and management for five years past. Costing $100 per acre, the total capital now invested in and upon it, is more than twice this amount, or in the neighborhood of $70,000—including the value of servants, live stock, implements, expenditures on fencing, &c. Is fond of enclosures of small or moderate extent, and has seventeen fields, surrounded by post and rail chestnut fence, costing $1.25 per panel of ten feet. Could not afford the land for the ordinary worm or Virginia fence, which not only occupies so much space, but furnishes a harbor for weeds and shrubs of all kinds to mature their seeds and thus run a foray over all the adjacent territory. His land—taking 1859 for instance, was 95 acres of it under Indian corn, 85 in wheat and 10 in oats, with the remainder under grass. Together with this large production of grain, he combines dairy operations, also upon a scale of considerable extent. The total sales off from the farm for the year referred to, were between $8,300 and $8,400. The land under wheat averaged throughout 21 bushels, 3 peeks, per acre—that in Indian corn, owing to a dry and unfavorable season, was below the average, which is rated at 50 bushels (10 bbls.) per acre, while the actual product was but about 7 bbls. or 35 bushels. Has raised 15 bbls. (75 bushels) corn per acre through a field of 12 to 15 acres, and has had a field of 18 acres in bearded Mediterranean wheat, which harvested 35 bushels per acre throughout.

Since Mr. Dennis has occupied this farm, he has applied large quantities of yard manure, as well as lime, of which latter we shall speak hereafter. He spreads the manure upon corn land in spring, but in fact is drawing it out more or less all the year round, according to season, applying upon the surface or plowing it in, as may suit each particular case. Plowing is sometimes done in fall or winter upon corn land, but he prefers the spring—plows *deep*, say from 12 to 14 inches; the land is then twice harrowed and chequered off with a single shovel plow, or with a kind of gang-plow coming into use, which marks for three rows at one operation. The corn is planted by hand where the chequers cross—careful boys being employed to drop the seed, three or four grains to the hill, which they do with great exactness. Covering is done either with the hoe, or in large fields with a sort of fork-pointed plow made for the purpose, which draws the earth over the seed. A harrow is run over the field as soon as the corn is fairly up, with the middle teeth taken out so as to straddle the rows. The customary distance apart is four feet each way. The field receives such subsequent cultivation as may be requisite to keep it in good order. Care is often taken at first to thin the corn to three stalks in the hill, but it is planted so carefully as not to render this imperatively necessary.

Barn-yard manure may be better applied to corn ground, Mr. D. remarked, than to any other; the cultivation of the field incorporates it so completely with the soil. The next crop to corn is winter wheat—uniformly *drilled in*, a practice which has become as completely established in favor with the Frederick farmers, as the use of the reaping machine at harvest. The land is seeded down with the wheat, and remains under grass from one to three years, according to the circumstances of the case. In this rotation the advantages are three-fold: the quality of the wheat is much better than when it follows the grass, and heavier in grain; the grass land instead of being plowed in early autumn for the wheat crop, is reserved for late pasturage, and also furnishes early spring feed before the corn-plowing, and, lastly, a better crop of corn is thus obtained than can be got in any other way. The only exception to the rule of deep plowing, occurs in the preparation of the corn stubble for the wheat; the land is already in good order, and only requires to be turned over for about four inches to make an excellent seed bed, and the manures that have been applied, instead of being "buried out of the sight" of the young wheat, are just where it can make use of them in getting an early start. It is to obtain this good start to begin upon, which is thought all-important, either with wheat or corn, in enabling the crop to withstand an unfavorable season or elude its insect enemies at a later period.

His preference for small enclosures, arises from the advantage he derives in frequently shifting his stock from one field to another—often keeping them upon the same pasture no longer than a week at once. He is also a strong advocate of putting the stock a-pasture as early in the season as possible, as soon as two or three inches of grass are in an eatable condition, instead of allowing the grass to grow higher—and reckoned that the economy of feed was enough to enable him to keep a fourth or a third more stock upon similar areas by these means, than he could otherwise.

One method of growing corn and potatoes together is worthy of particular description, as by it Mr. Dennis obtains nearly as much of either as he would, if it had the sole possession of the land. He had 12 acres thus employed this year; it is laid off in chequers 3½ by 4½ feet, instead of 4 by 4, as for corn alone, and the corn put in hills where the lines cross. The single shovel plow is then put through between the rows, the widest way, and the potatoes planted so as to be in line with the hills of corn, and allow the use of a shovel plow or cultivator in the 3½ feet between the rows the other way. The 12 acres referred to gave this year, which was unfavorable, a yield of 50 bushels per acre of potatoes, which is considered a very fair crop, and probably 8½ bbls. (42 bushels) of corn per acre, as nearly as can be estimated before the crop is finally measured. Mr. D. inclines to the opinion that there may be an absolute advantage to the potatoes, in the fact that their tops are thus shaded by the corn from the very hot suns of summer.

The Dairy and other Stock on Mr. Dennis' Farm.

Mr. Dennis has been in the habit of keeping from fifty to sixty milch cows, which he ordinarily buys with the young calf by their side—purchasing the ordinary stock of the neighborhood, such as cost him an average of $30 per head, which he keeps in good order and sells during the season after they are dry to the butcher—taking advantage of the markets if favorable, or reserving for a second season's milking if in any case it appears expedient. The calf is worth perhaps $4 to him, in effect reducing the cost of the cow by just so much. The cows sold last year happened to be marketed unusually well—at least they brought 4¾c. per lb. live weight at Baltimore, which netted a considerable advance upon their first cost. He had also during last winter a stock of about 250 sheep, of which 170 wethers, bought at $2.90 per head, were sold at 6¾c. per pound, and as they averaged about 75 lbs., brought a fraction over $5 each.

The object of his dairy operations is not the sale of milk, but the manufacture of Butter, with regard to the processes employed in which our time was too short to gather the particulars which would have been of most interest in connection with these details. From personal inspection we shall sometime hope to obtain any information here lacking; but the facts stated, together with one or two now to follow, will perhaps be considered sufficient to prove satisfactorily the possibility of profitable dairy farming in the latitude of Mr. D.'s residence, when the character of the land is such as to produce good corn and grass. He insisted upon this point, with the more urgency, because it has been claimed that butter-making cannot be successfully delegated to farm assistants or servants—arguing that with proper management on the part of the farmer himself, it can be undertaken as successfully as almost any other branch of agricultural production. As to the character of the butter he makes, those who have visited Barnum's admirable hotel at Baltimore will only need to know that its supplies are obtained from Mr. Dennis, while we understood from his statements that the gross return *for each milch cow* during the last year, amounts to about $67 per head—a return which will be exceeded we fancy by very few of our more northerly dairymen.

In feeding the cows, the ordinary mixture in use is one-half corn-and-oat meal—the corn and oats being ground together in equal proportions and one-half wheat bran, which last is procured at a cost ranging from 10 to 18 cents a bushel. They receive from a gallon to a gallon and a half each per day of this mixture, graduated according to the condition of the cow—given in two feeds, respectively at morning and night—together with what hay or corn fodder they will consume. The ordinary method of giving the corn fodder, which is perhaps his great dependence in getting through the winter, and an acre of which he considers at least as of equal value to the same surface under either clover or timothy,—is to spread the stalks loosely over the ground, the cattle picking off such of the leaves as they can, and the stalks being trodden in with the manure. If short of fodder, he cuts off the butt of the stalk and puts the remainder through a chaff-cutter, but the other is the most general way. He considers the manure of which the cornstalks form the vegetable portion, more valuable even than that made with straw—the stalk absorbing the liquid part more completely; he spreads over from 65 to 80 acres of land annually, and mostly with this sort of manure which soon becomes incorporated with the soil, and disappears from sight. The cows are always turned out at night during summer, in pastures adjacent to the stables, to which they are brought at evening to be milked, while during the day they probably occupy fields at a greater distance. He farther added with regard to the corn fodder, that his sheep seem to thrive on it better than upon hay, and that both the cattle and sheep will desert the latter in racks for the former scattered over the surface of the yard.

In the labor of the farm five men and four boys are employed, and it is a part of the duty of the latter to curry the cows thoroughly all the winter—an operation in which it is represented that "the party of the second part" takes great delight, receiving the intimation of the approaching curry-comb with as great pleasure as that of the coming breakfast. The growing of mangolds had been attempted for the cattle and sheep, but the grasshoppers were said to have eaten and the hot sun to have burnt them up, and Mr. D. finds that with bran, of which owing to the amount of wheat there grown and ground, any desirable quantity can generally be had, he can make variety enough for the cows to keep them doing well more cheaply than if he should undertake to raise, dig and house the stock of roots necessary to last him long into cold weather.

Hints for other Latitudes.

In the first paragraph of these notes the assertion was hazarded that they might perhaps be found to contain a hint or two of some practical weight with us, and we certainly wish that our farmers might be brought to estimate as Mr. D. estimates it, the importance of *liberal and judicious manuring*. His soil is naturally good, but he is by no means content with what Nature alone has given him. Not only does he apply farm-yard manure upon an extent only limited by his capacity for its manufacture, but he frequently makes use of guano with his corn and wheat, for the sake of "giving them a start," and plaster also is a constant and habitual application. Since he has had the farm, moreover, full 15,000 bushels of lime have been put upon it, being a dressing of fifty bushels per acre, a quantity sufficient, he thinks, to last for ten years, and proving as efficient, for that period at least, as a still larger dressing would do.

Another point with him is to keep the farm during the winter, *stocked as heavily*, and during the summer as *lightly* as he can, compatibly with the result of the crops. This is essential there, it is true, as a means of providing winter employment for hands which he is obliged to maintain the year round, whether they are at work or idle; but it adds to the force of that argument which we have advanced as the result of observation with regard to the success of English farmers—the necessity of keeping more stock for the sake of the manure they produce—that in this way our northern farmers may equalize in some measure the labors of the year—employing their own time and that of their assistants to good advantage in the winter, instead of allowing it to remain almost totally unproductive. The necessary consequence of having winter work which requires attention, is that it tends to facilitate the adoption of that system of hired labor, to which we have always looked as a source of relief to our *farmers' wives* from the too oppressive burden of their household cares, viz., the employment of married men by the year, to reside in tenant or farm cottages of their own—it being a well established fact that this system obviates much of the difficulty so often experienced by frequent change of hands at a time when field work is most pressing, while if by wintering more stock, more labor can then be advantageously engaged, both employer and employed have a renewed bond of mutual interest, inasmuch as the former can afford to hire for the twelve-month together, and the latter, sure of his winter's work, will be less likely to be tempted away by the offer of a dollar or two higher wages during seed-time or harvest. We advert to this subject, however, merely in passing—it is one which might indeed be more frequently canvassed, but on which we only intended at present to venture this hurried allusion.

The Method of Burning and Applying Lime.

Having of late had several inquiries as to the way of lime-burning practiced by Maryland farmers, we were glad of the opportunity of turning our "Discussion" to the cheapest way of constructing a kiln for the purpose. The simplest and most common method is the following:—Upon a surface of ground say 16 feet wide and twice this length, trenches are dug lengthwise about three feet apart and from 12 to 18 inches in depth and width. These trenches are covered with large flat stones, and between the trenches and over the stones there is first put a layer of kindling wood, such as old rails that will easily ignite, mixed with straw, &c., and a little Cumberland coal, which is chiefly used for fuel. A *thin* layer of the limestone follows, broken to a size of perhaps five or six inches diameter—then more coal and so on alternately, the limestone, as put in toward the top, being of any size it chances to come, until the very outside, which is pounded quite small and laid on very smoothly. The height of the pile may be five or six feet, the sides sloping at about an angle of 45° or perhaps a little less—the size is seldom if ever wider than 16 feet, but the length varies precisely according to the wants of the burner. When wood is the fuel employed, the main difference would probably be in the erection of a *front* to the kiln of permanent stone, and the enlargement of the trenches which here only serve for draft, to admit of feeding the fire from time to time.

After the pile is completed as above, the sides and top being composed as stated of the small limestone laid on compactly, the kiln may be covered with earth—but possibly not until after the fire has been started—to prevent too rapid combustion. A common way of doing this is to drive down stakes three feet or thereabouts from the pile, within which the earth is put, retained by boards against the stakes and surrounding the kiln on the sides as well as covering the top. The process of burning is completed in about four days and nights. A ton of coal, say 2200 lbs., will burn a hundred bushels of lime and costs $3.25. An ordinary kiln contains from one to two thousand bushels of lime, but they are sometimes much larger, occasionally reaching 6,000 bushels.

The kilns are often made directly in the field where the lime is to be used, and the whole cost, including quarrying, fuel, attendance, &c., may be reckoned at about 7½ cts. per bushel. In spreading the lime, the field is chequered off in 21 foot squares; a half-bushel put upon each of these squares is equivalent to fifty bushels per acre, and is put in a little pile where it stands until slacked and is then scattered evenly over the ground. It may be put on corn land after plowing when its effects can generally be traced in the succeeding crop.

Experience of Mr. Walker upon a Smaller Farm.

Mr. S. D. Walker who also resides near Frederick, occupies 40 acres which he cultivates upon a little different system, and on which he has obtained very good results. His rotation allows the land to lie four years in grass; he prefers to turn the sod under in late autumn or early winter, as it then ferments and decays, and he thinks that the worms which might thrive upon its foliage if only turned under in spring, until the young corn would be ready for them to attack and feed upon, are deprived of this refuge and provision by the action of winter on the already inverted sod. Two corn crops are then taken in succession—the first receiving no manure, as the decayed sod is a sufficient source of fertility, and the second only requiring a light dressing, much of the benefit of which latter is thought to accrue to the wheat crop which is sown the autumn after the second crop of corn is out of the way.

The fourth crop of the series is again wheat, preceded by a deep plowing—say 10 inches or a foot—and a thorough manuring of probably ten or fifteen good wagon loads per acre. As soon as the wheat is sown, or rather drilled, and this is generally about 1st of October, timothy is sown, and clover seed follows the next February or March. The land then lies four years more in grass, making altogether an eight-year rotation and giving each year ten acres of wheat and ten of corn out of the whole forty.

Upon four acres of grass following the foregoing routine of grain crops, Mr. Walker had kept five cattle and three horses from the 15th April, the season through—last year even up to the day before Christmas. It should not be omitted that lime and plaster are also in use on this farm. Mr. W. is an advocate like Mr. Dennis of turning stock to grass as early in spring as possible. His corn crop this year was about 10 bbls. (50 bushels) per acre in a season which as before noted was quite unfavorable.

We close this report for the present with the narrative of a particular acre of land, the results upon which, while they partake rather of the nature of *gardening* than that of farming, are worthy of being placed on record, although this deponent is by no means sure that he is not violating, in so doing, the confidence reposed in him by the narrator. The statements received were attested by witnesses, and are worthy of all credence:—Upon an acre of land, corn and potatoes were planted in a little different method from that mentioned by Mr. Dennis. It had been under corn and potatoes also in 1859, following a sod turned under the previous autumn. It was laid off in chequers 2½ feet each way, and the corn and potatoes put in alternately in each hill, with the sole exception that the *outside row* all around the field was in potatoes, because in cultivating with a horse, the hills would not obstruct his turning at the headlands, as corn would have done in the same place.

Green corn was sold from this acre of land, during the season of roasting ears, to the amount of $48, and at least $10 worth more still remains in the owner's hands—making the total result of the corn crop $58. Two hundred bushels of potatoes have also been sold at 60 cents per bushel, making $120. After a part of the corn was pulled and the earliest of the potatoes were gone, there was quite a strip—say a sixteenth of the field—put into turnips, of which considerable sales have already been made at 50 cts. per bushel, and the total return from this source will be about $15—making an aggregate of $193 for the acre. Nine bushels of potatoes were planted which cost $4.50, and the cost of the seed-corn was also a trifle. The total expense of plowing, planting, cultivating, digging and harvesting, including an allowance for handling the manure applied, is set down at $27—while as to the value of the manure itself, the corn fodder is received as a full equivalent—the crop of corn being considered as good as it would have been without any potatoes in the field. A few figures will show that this was a tolerably profitable acre, and with these details our Evening was brought to its conclusion. L. H. T.

THE CULTIVATOR.

ALBANY, N. Y., DECEMBER, 1860.

☞ As the labors of the Season are diminished by the approach of Winter, we desire to suggest to all, the propriety of devoting an occasional hour to a Review of the results accomplished during the busier Months of the growing and maturing of the Crops. Many who have kept no accurate accounts of the transactions of seed time and harvest, have still in their possession odd memoranda of many sorts, in note books, on scraps of paper, or perhaps merely on the tablets of the mind,—by reference to which, before they are lost or fade away, quite a History of the Year could still be made out; and it would be one, without doubt, which would be both instructive now and valuable for record and comparison hereafter. Those who have complete accounts of all the details of the farm operations, will find still more in them to reconsider—mistakes, perhaps, to guard against in future—successes or failures, the causes and consequences of which are well worthy of farther study and examination—at least it will be singular if there is nothing in the time thus expended, that shall prove either provocative of thought or suggestive of improvement.

This hint we throw out, however, not entirely with the disinterested aim that our readers may turn it to good account for themselves alone. Each, in that genuine and catholic spirit of good will which should be felt by every one who is engaged or interested in the cultivation of the soil,—may share much of the benefit thus derived with thousands of others in all parts of the country, to the mutual advantage of all; for there is no fact or lesson thus contributed to the common stock, which does not tend to encourage more general inquiry and discussion, and advance by just so much the information and the intelligence of those whose attention or imitation may be thus aroused.

A correspondent in the Canadian Agriculturist writes to that Journal:—"Now that the long evenings have arrived, I trust that many of your readers may be induced to use their pens, and communicate the experience and observations of another year. For the past two years I have been a subscriber to the Albany COUNTRY GENTLEMAN, and no department of that paper was so much *relished* by the writer as that portion containing the correspondence. Nor do I believe that in any other way the same amount of valuable information could be brought together; for the simple reason that these facts and observations come from practical farmers, not theorists."

Our correspondents have the opportunity of knowing what others think of their productions, and we have frequently had occasion to congratulate ourselves and the readers of our papers, that their number has been so constantly on the increase, while at the same time the character of their communications has done so much to manifest the growth our agriculture is making every day, and to spread still wider and farther the spirit of advancement. We bespeak their renewed contributions as Autumn wanes and the sun lingers longer in other skies, with the confident assurance that the exertion thus put forth can scarcely fail to re-act for their own good as well as render useful service on its mission among their brethren.

☞ "A Westchester Farmer" has favored us with an account of the Market Fair at Katonah, Oct. 17, which we do not publish at length only because our last number contained a letter upon the same subject from another correspondent. The establishment of these "institutions," however, is a matter of growing interest with our farmers, and they will watch the results of the experiment, wherever it may be tried, with considerable attention. We may therefore avail ourselves of the communication referred to, to present some farther facts with regard to this first gathering of the farmers of Westchester, for the purposes of sale and purchase,—premising that our present correspondent has been a leader in the undertaking and considers himself authorized to pronounce it satisfactorily successful. The entries on the clerk's book were as follow:—

Horses, matched and single,...	58	Bulls,...	5
Cows,...	95	Young cattle,...	10
Working oxen and fat steers—yokes...	15	Sheep,...	25
		Hogs,...	18

The fee for these entries—to provide for incidental expenses—was:—

CATTLE—10 cts. each for 10 or less in one lot, and 5 cts. for each animal beyond ten.
HORSES—20 cts. each for 10 or less—10 cts. for each, over ten.
SHEEP AND SWINE—5 cts. each.
Auction Sales—one per cent. on gross price.

The large number of cows present in proportion to other stock will be understood when it is remembered that the farmers of the locality are very largely engaged in the production of milk for the New-York market. Grain was also offered by sample in considerable lots—also apples, roots—including potatoes, carrots and mangolds—and a quite extended assortment of other agricultural or miscellaneous articles. The sales were rather slow at the outset and during the morning, but it is stated that in the end, about three-fourths of the stock offered had changed hands by private purchase. About 1 P. M., "the auction commenced," writes our correspondent, "with the sale of two bulls, an Ayrshire and a thorough-bred Short-Horn, which were put up with the announcement that the sale would be without reserve—an announcement that was hardly credited, until the bulls were in succession knocked down at very low prices. In the subsequent sales bids came more freely, confidence being restored, and after the sale of a number of milch cows, horses and sheep, including some imported African sheep of the broad-tailed variety, offered by the Rev. Henry Highland Garnett, which were bought by Mr. Jay, the auction wound up with sales of evergreen, flower and fruit trees."

"The fact," he continues, "that the arrangements for the Fair involved very trifling expense, that their cost was assumed by the parties at Katonah chiefly interested in the assemblage of so large a number of people, and that the fair occupied but a single day—enabling the farmer to combine business and profit with the enjoyment of a holiday—seemed to render it satisfactory to all,—a home market at their very doors for the sale, purchase and exchange of stock and products, being a thing never known to them before, and so immensely desirable as regards time and convenience. Farmers are slow to believe that such a market can be established in a moment, without expense, and with very trifling trouble, simply by common consent that at a certain time and place such a market shall be held."

Our correspondent concludes by recommending that entries be made a day or two beforehand, to allow time for the preparation of a printed catalogue embracing all that is to be offered for sale.

RICHARDSON'S IMPROVED HORSE SHOE.—We have had an opportunity of examining these horse shoes, and we are informed by those who have used them, that they have answered an excellent purpose. They are so constructed that the under side of the bar forming the shoe is *convex* instead of flat. This form renders the lower surface less adhesive to a stiff soil when the roads are muddy, as any one may discover who observes the difference in the force required to withdraw a round rod and a flat bar from stiff mud. We are informed that the use of a spring balance has shown that the convex shoe when bedded in clay, is withdrawn with about half a pound less force than the common flat one. This would make a vast difference to a horse in one day's travel. Four shoes thus lifted in every second, would be 7200 pounds in an hour, or twenty-eight tons in eight hours.

Another advantage of this form is that horses *ball* much less with snow than where the common square shouldered shoe is used; and stones cannot become wedged in them.

The manufacturer of this shoe is Charles Richardson of Auburn, N. Y., who also manufactures from selected scrap iron a material of admirable quality, which he furnishes already worked into shoes, or in convex bars ready for this purpose. Mechanics who use this iron inform us that they find it of the finest quality.

☞ In another column may be found an interesting communication upon the Farmers' Clubs of Franklin Co., Mass., prepared at our request by J. S. Grennell, Esq., the energetic Secretary of the County Ag. Society, as well as of the Greenfield Club, and a member of the State Board of Agriculture.

Massachusetts has set an example, in the systematic encouragement of these Clubs, which should not be lost upon other states. In New-York, for instance, the simple printing by the Legislature, of sufficient extra copies of the Transactions of our State Society, to supply the members of such Clubs, who pay One Dollar, would be taking one good step; and it is to be hoped that some member of the newly elected Assembly will bear the subject in mind.

But supposing the matter to be left hereafter, as it has been heretofore, entirely to the private enterprize of our Farmers, we are not without numerous examples of successful Clubs in this state which have thoroughly tested and determined the question—if question it is—of the expediency and utility of such organizations.

It is now just the time to be moving for the formation of new Clubs, and for old ones to be arranging their winter programme. Any hints from the experience of those who have taken part in their management in past seasons, will therefore be read with especial interest and may do much good. We have heard of several in our own State, which have organized courses of lectures, formal or informal, as a part of their system of operations—generally to be undertaken mostly by their own members, with such additional assistance from more distant sources as the Club think themselves able to afford. Any such courses, or simple appointments of meetings, we shall be glad to notice in the Country Gentleman. Let those who are stirring in these directions make others aware of their good works; perhaps one of the farmer's greatest difficulties is that he doesn't know enough of what other farmers are about.

—In this connection it may not be out of place to announce that preparations are now making for a second Agricultural Lecture Course under the auspices of Yale College, at New-Haven, Ct., during February next. The particulars will ere long be ready for publication.

☞ The liberality of Mr. Sheffield of New-Haven, in contributing to the erection of a Building for the use of the Scientific Department of Yale College, has been already mentioned in the Co. Gent. This building contains an extensive Laboratory, in which we learn that there is now a class of 12 students regularly occupied, although much labor is still required to perfect its arrangements. Not content with expending $50,000 in the erection of this edifice, Mr. Sheffield—as we are informed by a correspondent under date of Oct. 31—has just given $50,000 more toward the endowment of professorships.

Cabbages—Field Culture.—It would be interesting and instructive to not a few of our readers, to have a report from some one who has been in the habit of raising cabbages in the field for feeding to cows and other stock, containing some details as to manuring, planting, cultivating, harvesting, storing and feeding. It is pretty nearly a settled persuasion with us, that cabbage is rather too much neglected as a field crop in most districts within our knowledge. We have heard the remark from pretty good authority, that whoever would try a patch of cabbage for two or three years, and use them *judiciously* for his cows, cattle, and sheep, would never willingly be without a larger supply in succeeding years.

☞ A subscriber in Ohio, writes us as follows:—"Success to the Country Gentleman! I have spent from $25 to $70 every year for Agricultural papers since I commenced farming in April 1853, and I find the Country Gentleman worth ANY OTHER Two that I take."

Apples from Western New-York.—From the returns in the Canal Collector's office in this city, we find, says the Evening Journal, that during the month of October, thirty-nine thousand, three hundred and five barrels of apples were received from the west, and forwarded to their destination. This amount ought to supply not only the city of New-York, but also a good proportion of the New England States. This probably is only a commencement of the receipts, as the most hardy fruit will not be in a condition to ship before the early part of this month.

Heavy Crops.—Mr. Elias McKean of Washington Co., Minnesota, the past season harvested 4,379 bushels of oats, machine measure, from 68 acres of land, or a fraction over 64 bushels per acre. He also harvested 76 acres of wheat, which yielded 33½ bushels per acre by measure. Both crops would have greatly overrun these amounts by weight.

☞ Dr. R. T. Underhill will accept our thanks for samples of the Grape Crop, from his extensive Isabella and Catawba Vineyards at Croton Point, on the Hudson river. We believe the Dr.'s faith in these two popular varieties has never languished for a moment, notwithstanding the crowd of recent aspirants to the favor of the Horticultural world.

The Barometer.—Seeing an inquiry about the utility of Barometers, in your paper, I thought perhaps other experience on the subject might be acceptable. I have had one of Timby's patent portable barometers for two or three months. It is a single column of mercury, with or without an index, according to choice, and costs about $8. Though it is by no means infallible, I would not be without it for the price of it. G. H. *Medford, N. J.*, 10 *mo.* 25.

A Hint for Huskers.—"Husking," says a correspondent of the *New-England Farmer*, "may be greatly facilitated by *breaking off the ears* before stripping. By pressing the thumb and fingers firmly against the butt of the ears, and bending over with the other hand, one may acquire the habit of breaking them off, so that many ears will have few, if any, husks left. The stooks need not be untied. By a little ingenuity at contrivance, one may fix a low bench three feet wide, or so, throw a stook upon it, sit down, with feet under the bench, begin on one side to break off, and make clean work as he goes; or, he may kneel down to the stooks as they stand, or lie on the floor."

The Garnet Chili Potato.—A correspondent of the Country Gentleman, at Cherry Valley, writes as follows: "I have taken more interest in the potato than anything else. Three years ago I sent for all the best varieties which I saw advertised, and especially those which were advertised as free from disease, namely, the Prince Albert, Peach Blow, Davis, Garnet Chili and several other kinds raised by Mr. Goodrich. All these show *considerable* disease, *except the Garnet Chili*. This has been a trying season, and a potato that will bear the test, I regard as a valuable acquisition. The Garnet Chili is valuable on many other accounts, and I regard Mr. Goodrich as a benefactor of his country in having produced so valuable an acquisition. It ought to be more generally known, and a public expression of gratitude is due to Mr. Goodrich."

The Art of Agriculture.—A great deal has been written and said about the science and art of agriculture, but for practical guidance the whole thing is in a nut shell. It consists in these two rules—make the land rich, and keep the weeds down. If any person who tries to raise any plant will follow these two rules he will succeed, and if he does not follow them he will not succeed.

Transactions of the New-York State Agricultural Society, for 1859.

This is a good solid volume of about 800 pages, and like its predecessors, is full of interesting and varied information on agricultural subjects. Several of its most important papers deserve special notice. The first is the general Report of B. P. Johnson, the Corresponding Secretary, and comprises within a few pages a condensed review of agricultural progress for the previous year, and more particularly of the successful labors of the State Society. There are some facts stated which we must repeat. One alludes to the destruction of sheep by dogs in Ohio, the loss amounting in 1858, to 60,536 killed, and 36,441 injured; the total damages in one year being $146,000. Another fact is given as a proof of the benefit conferred upon the country by a single model farm. One to which the first premium of the Society had been awarded, "was visited in one season by fifty persons out of the State, while of those residing in our State, the number was probably much larger." The Report of the discussions at the State Fair and at the Annual Meeting, is full of interest; and although we sometimes see error with much valuable truth, there is a kind of practical knowledge brought out on these occasions, which cannot be found elsewhere. Well-reported discussions of this kind, by the best farmers of the State, are read with great interest by cultivators, and should be encouraged by the Society.

An unusual amount of practical information is presented on Dairy husbandry from practical farmers, and this portion is exceedingly valuable and interesting.

One of the best parts of the volume is the survey of Onondaga County, by George Geddes, one of the most competent persons for such a task which the country affords, and which he has performed with great ability. The Geological references are very valuable—the full description of the salt springs and of the manufacture of salt, will be read with interest by many—but the remarks on "Practical Agriculture," from which several extracts have appeared in the Co. Gent., will be especially esteemed by general readers, the author being not only a most successful farmer, but one who has an utter dislike to all shams. There appear to be two or three typographical errors in the scientific names of a few plants, as where *Poa compressa* as well as *P. pratensis*, is given as Kentucky Blue-grass—where the *Cupressus thyoides* (or white cedar of New-England,) is given as the white cedar of Western New-York, which we suppose in this case to be the *Thuja occidentalis*—and where *Cerasus serotina* (or choke cherry,) is given as the common wild cherry, which is the *C. virginiana*. These are, however, small errors, and do not affect the great practical value of the work.

The "Glimpses of Agriculture in Great Britain," by Luther H. Tucker, Treasurer of the Society, comprise in part the substance of the letters which have already appeared in our columns, and we trust that it may not be improper to say of our young associate at a distance of 150 miles longitude, what others, who are much better judges, have said before, that he has given the best description of British Agriculture within the same compass, that has yet appeared.

There is a vast amount of other valuable information, comprised in smaller papers, practical communications, results of experiments, abstracts of county reports, &c., that form altogether a most valuable volume, which farmers can read, study, and draw upon to a large amount. J. J. T.

[For the Country Gentleman and Cultivator.]

The Farmers' Clubs of Massachusetts.

Eds. Country Gentleman—In accordance with your request I send you a brief sketch of the formation and working of our "Farmers' Clubs." The idea originated in the Board of Agriculture, and on their suggestion the Legislature of 1859 passed an act, providing that "every Farmers' Club properly organized by the election of officers and holding regular meetings of its members, shall, upon application made in November of each year to the Secretary of the Board of Agriculture, receive copies of the report of said Board, and of its other publications, in proportion to the number of its members, and of the applications so made, and said Farmers' Clubs receiving such benefits from the State, shall annually in October, make returns to the Secretary of the Board of Agriculture of the reports of Committees and of agricultural experiments made by such Clubs. A sum not exceeding two thousand dollars is hereby placed at the disposal of the Secretary of the Board of Agriculture, to carry out the provisions of this act."

Under this liberal provision of the Legislature, the members of the Board proceeded to establish clubs in their respective localities, and with great success. Seven were in active operation all last winter in Franklin county west of the Connecticut, and one east, and I am happy to say that in all of them the Country Gentleman is taken, and so well appreciated that the list will be handsomely increased next January.

As there was a general similarity to all, I send you the Constitution of the only one I happen to have by me:

Constitution of the Greenfield Farmers' Club.

Article 1. This Association shall be called the "Greenfield Farmers' Club.

Art. 2. The officers shall be a President, Vice President, Secretary and Treasurer, who shall be chosen by ballot, and who shall hold their offices for one year and until others are chosen to fill their places.

Art. 3. The President shall preside at all meetings of the Club with power to preserve order, appoint committees and assign topics for discussion at the suggestion of the members.

Art. 4. In the absence of the President, all his powers shall be exercised by the Vice President.

Art. 5. The Secretary shall keep a record of the proceedings of each meeting, which shall be read by him at the next meeting after. He shall preserve all reports of committees, essays, and other papers, and conduct whatever correspondence shall be ordered by the Club.

Art. 6. There shall be at each meeting a discussion upon a topic previously announced, which shall be commenced by four members designated at the previous meeting by the presiding officer, and such other exercises as the Club may deem proper.

Art. 7. The annual meeting of this Club shall be in the first week in January of each year, when the officers shall be chosen.

Art. 8. Any person may become a member of this Club by paying one dollar and signing this Constitution.

Art. 9. This Constitution may be altered or amended by a vote of two-thirds of the members present at any meeting, notice of the proposed change having been given at a previous meeting.

Our first meeting was holden in December, and from that time till late in March, when the travelling became very bad, we had meetings every week—well attended; we had over forty members.

We fixed no day of regular meeting in our constitution, because we preferred to fix at each meeting the time for the next—dodging lyceum lectures, concerts, and meetings of all kinds which occur during the winter. A great point gained was to make the whole thing a social neighborly affair—to develop what knowledge and experience we had among us by plain unpretentious talk; to carefully avoid a set debate. Of course there would be differences of opinion on every subject, but expressed in a conversational way; a member would give his theory or experience, and then would be called upon to answer questions concerning it. I know that our rule requesting members to keep their seats when addressing the President, or each other, instead of standing, had a very great influence in thawing the frigidity of such meetings—in encouraging the timid and shy, who would shrink from standing up conspicuously and addressing the club in a formal manner, while from their seats they would unobtrusively express opinions, the result of observation and experience, generally of the greatest value. It gave it a neighborly fireside character, which from observation of other clubs, I am satisfied was the most pleasant, satisfactory, and improving.

Occasionally fruit would be brought in, both for examination and comparison, and for eating. Different experiments, to be tried during the winter or coming summer, are assigned to committees, who report at their leisure. Reports quite fully written out, of the subjects and discussions, were every week printed in our village papers, and were read through the county with great interest. Among the subjects discussed, were "Winter Treatment of Stock of all Kinds," "Manures," "Plowing," "Raising of Calves," "Sheep," "The Dairy and Dairy Stock," "Fruit and Fruit Trees," "Raising of Corn," &c., &c. Some of these occupied three successive meetings, and were fully discussed.

We closed on the first of April, when spring work commenced, and we shall start again the first week in December.

All our members have been supplied with the State Agricultural Report, a handsome and valuable volume, prepared by our efficient and hard-working Secretary, whose Reports are not surpassed by those of any State in the Union. "Long may he wave."

On the whole, the experiment of these Clubs was a decided success, and they will become a permanent institution. Such gatherings make men better acquainted with each other; they bring men together, and, by thus mingling, the rough irregularities of character and manner are rubbed down, the chill crust of reserve and shyness is cracked, and men take an equal pleasure in learning from others and in imparting their own knowledge.

I think that the honor of establishing "Farmers' Clubs" belongs to the old Bay State. JAMES S. GRENNELL.

Greenfield, Mass, Nov. 1, 1860,

Inquiries and Answers.

GUANO FOR POTATOES.—Will you oblige me by informing me through the Co GENT., what is the common or most approved method of using guano with the potato crop—whether by putting it in the hill or applying it otherwise, and the quantity it is thought most advisable to use to the acre, together with any remarks upon this subject you may think will be of advantage to one practically unacquainted with the use of it. W. M. J. *Digby, N. B.* [Guano may be variously applied. Perphaps the best way is to strew it along the furrow before dropping the sets, and mixing it a little with the soil by dragging along the bottom of the furrow a small cylindrical mass of brush, or running a small plow lightly along. Then drop the potatoes about 18 inches apart, and cover them. If dropped in hills, throw half an inch or so of earth over the guano before planting. Four or five hundred pounds per acre is an ample supply.]

CATTLE STABLES.—Can you send me, in any back number, a really good plan for a stable for feeding fifty or one hundred cattle, with best mode of haltering or fastening the cattle. We winter and graze a large number of cattle in this part of Virginia, but they are all fed during the winter in the open fields, (usually on blue grass sod,) with straw, corn fodder, and a few bushels of corn just before they go on grass in the spring. R. H. DULANY. [Our correspondent will find plans for large barns on pages 144 and 149 of vol. 1, of Rural Affairs, (or on corresponding pages of the Illustrated Annual Register for 1856,) and on pages 96 and 284 of the same work, vol. 2. Descriptions of the interior of cattle stables are given on pages 286 and 287 of vol 2 of the same work. We mail *either vol.* postpaid on receipt of One Dollar.]

GRAIN WEEVIL.—Enclosed I send you a few black or barn weevils, as they are called. Do you or any of your numerous readers know of any way to get rid of them, except by starvation by not putting any grain into the barn for a few years, which is the only way known in our neighborhood, and which is a great trouble and inconvenience? Something must be done to destroy them, for they increase very fast, and would in a few years more destroy half of the wheat and rye in some barns. A small description, together with the mode of destroying them, will be thankfully received by at least one of your numerous readers. H. K. *Wrightsville, Pa.* [This insect is the *Calahdra granaria*, (or *Curculio granaria*, of Linn.) It resembles in general form the common or plum curculio, but is slenderer, and of a dark brown color, and only about one-seventh of an inch in length. It is described in a note appended by Loudon to Kollar's Treatise on Insects, who states that the female deposits her eggs upon wheat in granaries, and the young larvæ immediately burrow into the grain, and eat the interior, leaving the shell entire. It increases with great rapidity, a single pair being capable of producing several thousand in a year. Loudon says that the most effectual mode of destruction is kiln drying. It was found that 110 degrees of Fahrenheit, (12° above blood heat,) did not prevent their development, but that 130 to 140 degrees killed them. Ventilation and repeated shifting of the wheat were found to be great preservatives. No doubt the heat from the pipe of an anthracite coal stove, or even of a common wood stove, thrown into the granary, so as to produce a heat equal to 140 degrees, which could be easily ascertained by a thermometer' would answer an excellent purpose]

GOOSEBERRY, &c.—Can you tell me where I can obtain the "Mountain Seedling Gooseberry," which is noticed and illustrated on p. 304, Oct. CULTIVATOR, and the price? Also "Pike's Defiance Cucumber," and the "Bezi Mai Pear?" G. W. BELOTE. *Ohio.* [The Mountain Seedling Gooseberry can be procured of E. Y. Tens, Richmond, Ind., and probably of most other nurserymen. We do not know that the other things mentioned are to be had in this country.]

QUINCE FROM CUTTINGS.—Will Angers quince grow readily from the cuttings? Will it grow as readily as the Orange quince? [The Angers quince usually grows more readily from cuttings than the common or Orange—if the cuttings are well put out, very early in spring or in autumn, and mulched with an inch or two of very fine manure, a large portion of them will grow,—say from one-fifth to one-half. Many consider spring setting as most successful; but we are inclined to give the preference to autumn, provided the mulching just spoken of is given them. It is very important that the earth be compactly packed about them. A single example of its importance:—A row of cuttings was set out when there was a thin crust of frozen earth, which prevented perfect packing. Not one in a hundred lived. Along side this row, of several others well put in, about one-half the cuttings grew.]

ALSIKE CLOVER.—I can tell J. M. Macalister all about Alsike clover another year, as a friend of mine near here, has a crop growing, sown last June. It is doing well—also the *incarnata* Thorburn had no seed this year, and my friend sent to Canada for it. We imported a lot some years ago; sold a little, kept balance three years—no demand—then threw it away. It is said Alsike makes the best of Bee pasture. A.

ARCHITECTURE.—There is a work mentioned in THE CULTIVATOR for 1847, called the "American Architect," by Ritch & Grey, published by C. M. Saxton, New-York, in numbers, 25 cents each. I have not seen the work, but should be glad to know if it is useful. I have paid too much for books that have turned out trash, only made to display the writer's ability to pile words together, to trust to buy any just by seeing the name of them. RUSTICUS.

STEPHENS' BOOK OF THE FARM.—*J. W. S.* We know of no edition of this work since the one with American notes by the late Professor Norton, issued several years ago, and published by L. Scott & Co. New-York, price $5.

CHINA PIGS.—Will you please tell me of some person who has the full blooded China pigs for sale? I am anxious to obtain a pair? J. W. J. *Knob Noster, Mo.* [We do not know where they can be procured]

LANGSTROTH'S PATENT HIVE.—I would inform W. C H that Mr. Langstroth cannot prevent any one from using the movable frame, but his patent is good for his particular arrangement, viz., suspending the frame and the shallow chamber in connection with the frame and honey board. There are several patents for movable comb hives. I have a hive that is as good as any of them, and does not infringe any patent, I have not made it public, but I may do so before long. J. W.

PIE-MELON PIES.—We give the following from an Iowa paper, in answer to a recent call for information by one of our correspondents:—"Remove the seeds, pare, slice up, and stew them as you would pumpkins, just enough to have it like stewed apples. When done, add sugar, spices and a little acid, such as tartaric acid, lemon juice, or good sharp vinegar, (the last is not quite as good) A tablespoonful of lemon juice to four pounds of melon is the best preparation. Do not put the sauce in copper or brass. For a pumpkin or a custard pie, omit the acid, but bring the mass to a proper consistency by adding sugar, milk and eggs. Only a little of these ingredients will be necessary, just sufficient to give color and flavor. A superior preserve is also made of it. It is thought to be a valuable acquisition in the West.

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Do good with what thou hast, or it will po thee no good.

THE SATURDAY EVENING POST.

ANOTHER AND MORE SPLENDID ENGRAVING!

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THE BEST WRITERS,

will always be found in THE POST. Our Stories for the last year have been generally acknowledged to be of the most interesting character; and we design not to allow any falling off in this respect—though any improvement is hardly possible. But THE POST also aims to instruct; it contains weekly

An Agricultural Department,	**The Markets and Bank Note List,**
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This Engraving was first issued by the LONDON ART UNION. It is 36 inches long, by 24 inches wide—contains from 30 to 40 figures, and is one of the handsomest Engravings now before the American and British public. The publisher's price for it (sold by canvassers) is Five Dollars.

OUR BOOK PREMIUMS.—These are two: LIPPINCOTT'S FAMOUS PRONOUNCING GAZETTEER AND GEOGRAPHICAL DICTIONARY OF THE WORLD, and the equally famous WEBSTER'S NEW PICTORIAL QUARTO DICTIONARY. Lippincott's Pronouncing Gazetteer and Geographical Dictionary of the World, is a work that no man or family should be without. It is a large volume of 2,182 closely printed pages, and contains an IMMENSE MASS OF USEFUL KNOWLEDGE. You have in it the most recent and authentic information respecting nearly 100,000 places—countries, islands, rivers, mountains, cities, towns, &c., in every portion of the Globe. Of Webster's New Pictorial Quarto Dictionary, containing 1,500 Wood Cuts, but little need be said—its value being apparent to all. NO FAMILY SHOULD BE WITHOUT IT.

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☞ TO EDITORS.—Editors who give the above one insertion, or condense the material portions of it for their editorial columns, shall be ENTITLED to an exchange, by sending us a marked copy of the paper containing the advertisement or notice. Nov. 15—w&m1t.

WANTED—KING PHILIP OR BROWN CORN —200 bushels select ears for seed. Address
Nov. 15—w&m1t. R. L. ALLEN, 189 & 191 Water-st., New-York.

PORTABLE FRENCH BURR STONE MILLS, of the best material, and constructed on the latest principles; from 12 to 30 inches diameter. The largest are capable of grinding 25 to 35 bushels of horse or cattle feed per hour, when properly managed and driven by water or steam power. Smaller sizes may be driven by horse power.
R. L. ALLEN, 189 & 191 Water-street,
Nov. 15—w&m1t. New York.

FRUIT FARM FOR SALE.

About two hundred acres of the

FINEST LAND IN CAYUGA COUNTY,

in good condition, and well situated on the lake shore. It is part of a large fruit farm, the principal orchards of which are reserved; but the portion offered includes the farm house and barns, and

Three Thousand Thrifty Young Apple and Standard Pear Trees,

of the best varieties. Price, $100 per acre for the whole, or $100 to $500 per acre for selections. Apply at the Journal of Commerce Office, 91 Wall Street, New-York city, or to RICHARD HALE, Aurora,
Nov. 15—w2tm1t. Cayuga Co., N. Y.

THE OPORTO GRAPE.—

This grape is designed for making a first quality of wine. It is *perfectly hardy*, in lat. 43 degrees. It never mildews; it is a good bearer; ripens its fruit early; grapes do not fall off; it has been proved for 20 years, and found always reliable; the wine sells readily at from $2 to $4 per gallon. The grapes have been analyzed by C. T. Jackson, State Assayer of Massachusetts, and found to contain 15 per cent. of grape sugar by the tables, and 2 per cent. tartaric acid. N. Longworth, Esq., says it is the thickest MUST (juice) he has ever seen. Extract from his letter:

CINCINNATI, October 27, 1860.

Dr. E. WARE SYLVESTER—Dear Sir: The Grapes are received. I have pressed out the must. * * * * To my surprise it weighs eighty-two degrees, a fair weight. Must as black as ink, and thicker than any I have seen. Yours, &c., N. LONGWORTH.

DR. CHAS. T. JACKSON'S OPINION OF OPORTO WINE.

This specimen of Oporto is not too sweet, but is just right, and is a good Wine, which will improve on age, if bottled. The high color of the Oporto Grape is a valuable property, since the Wine has a fine color, not common to American Grape Wines.

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